

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**OPC unified architecture –
Part 12: Discovery and global services**

**Architecture unifiée OPC –
Partie 12: Services globaux et de découverte**



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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CONTENTS

FOREWORD.....	8
1 Scope.....	10
2 Normative references	10
3 Terms, definitions, abbreviated terms and conventions.....	11
3.1 Terms and definitions.....	11
3.2 Abbreviated terms and symbols	13
3.3 Conventions for namespaces	13
4 The discovery process.....	14
4.1 Overview.....	14
4.2 Registration and announcement of Applications	15
4.2.1 Overview	15
4.2.2 Hosts with a LocalDiscoveryServer	15
4.2.3 Hosts without a LocalDiscoveryServer	16
4.3 The discovery process for Clients to find Servers.....	16
4.3.1 Overview	16
4.3.2 Security	17
4.3.3 Simple Discovery with a DiscoveryUrl	17
4.3.4 Local Discovery	17
4.3.5 MulticastSubnet Discovery.....	18
4.3.6 Global Discovery	19
4.3.7 Combined Discovery Process for Clients	19
5 Local Discovery Server.....	20
5.1 Overview.....	20
5.2 Security considerations for Multicast DNS.....	21
6 Global Discovery Server	21
6.1 Overview.....	21
6.2 Network architectures	22
6.2.1 Overview	22
6.2.2 Single MulticastSubnet	22
6.2.3 Multiple MulticastSubnet.....	23
6.2.4 No MulticastSubnet.....	23
6.2.5 Domain Names and MulticastSubnets.....	24
6.3 Information Model	25
6.3.1 Overview	25
6.3.2 Directory.....	25
6.3.3 DirectoryType	25
6.3.4 FindApplications	26
6.3.5 ApplicationRecordDataType.....	27
6.3.6 RegisterApplication.....	28
6.3.7 UpdateApplication	29
6.3.8 UnregisterApplication	30
6.3.9 GetApplication	30
6.3.10 QueryApplications	31
6.3.11 QueryServers (deprecated).....	33
6.3.12 ApplicationRegistrationChangedAuditEventType.....	34
7 Certificate management overview	35

7.1	Overview	35
7.2	Pull Management	36
7.3	Push management	36
7.4	Provisioning	37
7.5	Common Information Model	38
7.5.1	Overview	38
7.5.2	TrustListType	38
7.5.3	OpenWithMasks	39
7.5.4	CloseAndUpdate	40
7.5.5	AddCertificate	41
7.5.6	RemoveCertificate	42
7.5.7	TrustListDataType	42
7.5.8	TrustListMasks	43
7.5.9	TrustListOutOfDateAlarmType	43
7.5.10	CertificateGroupType	43
7.5.11	CertificateType	44
7.5.12	ApplicationCertificateType	45
7.5.13	HttpsCertificateType	45
7.5.14	UserCredentialCertificateType	45
7.5.15	RsaMinApplicationCertificateType	46
7.5.16	RsaSha256ApplicationCertificateType	46
7.5.17	CertificateGroupFolderType	46
7.5.18	TrustListUpdatedAuditEventType	47
7.6	Information Model for Pull Certificate Management	48
7.6.1	Overview	48
7.6.2	CertificateDirectoryType	48
7.6.3	StartSigningRequest	49
7.6.4	StartNewKeyPairRequest	51
7.6.5	FinishRequest	53
7.6.6	GetCertificateGroups	54
7.6.7	GetTrustList	55
7.6.8	GetCertificateStatus	56
7.6.9	CertificateRequestedAuditEventType	57
7.6.10	CertificateDeliveredAuditEventType	58
7.7	Information Model for Push Certificate Management	58
7.7.1	Overview	58
7.7.2	ServerConfiguration	59
7.7.3	ServerConfigurationType	59
7.7.4	UpdateCertificate	61
7.7.5	ApplyChanges	62
7.7.6	CreateSigningRequest	63
7.7.7	GetRejectedList	64
7.7.8	CertificateUpdatedAuditEventType	64
8	KeyCredential management	65
8.1	Overview	65
8.2	Pull management	66
8.3	Push management	66
8.4	Information Model for pull management	67
8.4.1	Overview	67

8.4.2	KeyCredentialManagement	68
8.4.3	KeyCredentialServiceType	68
8.4.4	StartRequest	69
8.4.5	FinishRequest	70
8.4.6	Revoke	71
8.4.7	KeyCredentialAuditEventType	72
8.4.8	KeyCredentialRequestedAuditEventType	73
8.4.9	KeyCredentialDeliveredAuditEventType	73
8.4.10	KeyCredentialRevokedAuditEventType	73
8.5	Information Model for push management	74
8.5.1	General	74
8.5.2	KeyCredentialConfiguration	74
8.5.3	KeyCredentialConfigurationType	75
8.5.4	UpdateCredential	75
8.5.5	DeleteCredential	76
8.5.6	KeyCredentialUpdatedAuditEventType	77
8.5.7	KeyCredentialDeletedAuditEventType	77
9	Authorization Services	78
9.1	Overview	78
9.2	Implicit	78
9.3	Explicit	79
9.4	Chained	80
9.5	Information Model for Requesting Access Tokens	81
9.5.1	Overview	81
9.5.2	AuthorizationServices	82
9.5.3	AuthorizationServiceType	82
9.5.4	RequestAccessToken	83
9.5.5	GetServiceDescription	84
9.5.6	AccessTokenIssuedAuditEventType	85
9.6	Information Model for configuring Servers	85
9.6.1	Overview	85
9.6.2	AuthorizationServices	86
9.6.3	AuthorizationServiceConfigurationType	86
Annex A (informative)	Deployment and configuration	87
A.1	Firewalls and discovery	87
A.2	Resolving references to remote Servers	89
Annex B (normative)	Constants	91
Annex C (normative)	OPC UA Mapping to mDNS	92
C.1	DNS Server (SRV) record syntax	92
C.2	DNS Text (TXT) record syntax	92
C.3	DiscoveryUrl mapping	93
Annex D (normative)	Server Capability Identifiers	94
Annex E (normative)	DirectoryServices	95
E.1	Global Discovery via other directory services	95
E.2	UDDI	95
E.3	LDAP	96
Annex F (normative)	Local Discovery Server	98
F.1	Certificate store directory layout	98

F.2	Installation directories on Windows	99
Annex G (normative)	Application installation process	100
G.1	Provisioning with Pull Management	100
G.2	Provisioning with Push Management	100
G.3	Setting permissions	101
Annex H (informative)	Comparison with RFC 7030	102
H.1	Overview	102
H.2	Obtaining CA Certificates	102
H.3	Initial enrolment	102
H.4	Client Certificate reissuance	103
H.5	Server key generation	103
H.6	Certificate Signing Request (CSR) attributes request	103
Figure 1	– The Registration process with an LDS	16
Figure 2	– The simple Discovery process	17
Figure 3	– The Local Discovery process	18
Figure 4	– The MulticastSubnet Discovery process	18
Figure 5	– The Global Discovery process	19
Figure 6	– The Discovery Process for Clients	20
Figure 7	– The relationship between GDS and other components	21
Figure 8	– The Single MulticastSubnet architecture	22
Figure 9	– The Multiple MulticastSubnet architecture	23
Figure 10	– The No MulticastSubnet architecture	24
Figure 11	– The Address Space for the GDS	25
Figure 12	– The Pull Certificate management model	36
Figure 13	– The Push Certificate management model	37
Figure 14	– The Certificate Management AddressSpace for the GlobalDiscoveryServer	48
Figure 15	– The AddressSpace for the Server that supports Push Management	59
Figure 16	– The Pull Model for KeyCredential management	66
Figure 17	– The Push Model for KeyCredential management	67
Figure 18	– The Address Space used for Pull KeyCredential management	68
Figure 19	– The AddressSpace used for Push KeyCredential management	74
Figure 20	– Roles and Authorization Services	78
Figure 21	– Implicit authorization	79
Figure 22	– Explicit authorization	80
Figure 23	– Chained authorization	81
Figure 24	– The Model for Requesting Access Tokens from Authorization Services	82
Figure 25	– The Model for configuring Servers to use Authorization Services	85
Figure A.1	– Discovering Servers outside a firewall	87
Figure A.2	– Discovering Servers behind a firewall	88
Figure A.3	– Using a Discovery Server with a firewall	89
Figure A.4	– Following References to Remote Servers	90
Figure E.1	– The UDDI or LDAP Discovery process	95
Figure E.2	– UDDI registry structure	96

Figure E.3 – Sample LDAP hierarchy	97
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Table 1 – GDS NamespaceMetadataType Object definition	14
Table 2 – Directory Object definition	25
Table 3 – DirectoryType definition.....	26
Table 4 – FindApplications Method AddressSpace definition.....	27
Table 5 – ApplicationRecordDataType definition	28
Table 6 – RegisterApplication Method AddressSpace definition	29
Table 7 – UpdateApplication Method AddressSpace definition	30
Table 8 – UnregisterApplication Method AddressSpace definition	30
Table 9 – GetApplication Method AddressSpace definition.....	31
Table 10 – QueryApplications Method AddressSpace definition	33
Table 11 – QueryServers Method AddressSpace definition	34
Table 12 – ApplicationRegistrationChangedAuditEventType definition	35
Table 13 – TrustListType definition	39
Table 14 – OpenWithMasks Method AddressSpace definition	40
Table 15 – CloseAndUpdate Method AddressSpace definition	41
Table 16 – AddCertificate Method AddressSpace definition	41
Table 17 – RemoveCertificate Method AddressSpace definition.....	42
Table 18 – TrustListDataType definition	42
Table 19 – TrustListMasks values	43
Table 20 – TrustListOutOfDateAlarmType definition.....	43
Table 21 – CertificateGroupType definition	44
Table 22 – CertificateType definition	45
Table 23 – ApplicationCertificateType definition.....	45
Table 24 – HttpsCertificateType definition.....	45
Table 25 – UserCredentialCertificateType definition.....	46
Table 26 – RsaMinApplicationCertificateType definition	46
Table 27 – RsaSha256ApplicationCertificateType definition.....	46
Table 28 – CertificateGroupFolderType definition	47
Table 29 – TrustListUpdatedAuditEventType definition	47
Table 30 – CertificateDirectoryType ObjectType definition	49
Table 31 – StartSigningRequest Method AddressSpace definition.....	51
Table 32 – StartNewKeyPairRequest Method AddressSpace definition	53
Table 33 – FinishRequest Method AddressSpace definition	54
Table 34 – GetCertificateGroups Method AddressSpace definition.....	55
Table 35 – GetTrustList Method AddressSpace definition	56
Table 36 – GetCertificateStatus Method AddressSpace definition	57
Table 37 – CertificateRequestedAuditEventType definition	58
Table 38 – CertificateDeliveredAuditEventType definition	58
Table 39 – ServerConfiguration Object definition	59
Table 40 – ServerConfigurationType definition.....	60
Table 41 – UpdateCertificate Method AddressSpace Definition	62

Table 42 – ApplyChanges Method AddressSpace Definition	63
Table 43 – CreateSigningRequest Method AddressSpace definition.....	64
Table 44 – GetRejectedList Method AddressSpace definition.....	64
Table 45 – CertificateUpdatedAuditEventType definition	65
Table 46 – KeyCredentialManagement Object definition	68
Table 47 – KeyCredentialServiceType definition	69
Table 48 – StartRequest Method AddressSpace definition	70
Table 49 – FinishRequest Method AddressSpace definition	71
Table 50 – Revoke Method AddressSpace definition.....	72
Table 51 – KeyCredentialAuditEventType definition	72
Table 52 – KeyCredentialRequestedAuditEventType definition	73
Table 53 – KeyCredentialDeliveredAuditEventType definition	73
Table 54 – KeyCredentialRevokedAuditEventType definition	74
Table 55 – KeyCredentialConfiguration Object definition.....	74
Table 56 – KeyCredentialConfigurationType definition	75
Table 57 – UpdateCredential Method AddressSpace definition	76
Table 58 – DeleteCredential Method AddressSpace definition	77
Table 59 – KeyCredentialUpdatedAuditEventType definition	77
Table 60 – KeyCredentialUpdatedAuditEventType definition	77
Table 61 – AuthorizationServices Object definition.....	82
Table 62 – AuthorizationServiceType definition.....	82
Table 63 – RequestAccessToken Method AddressSpace definition	84
Table 64 – GetServiceDescription Method AddressSpace definition.....	85
Table 65 – AccessTokenIssuedAuditEventType definition	85
Table 66 – AuthorizationServices Object definition.....	86
Table 67 – AuthorizationServiceConfigurationType definition	86
Table C.1 – Allowed mDNS service names	92
Table C.2 – DNS TXT record string format.....	93
Table C.3 – DiscoveryUrl to DNS SRV and TXT Record Mapping	93
Table D.1 – Examples of <i>ServerCapabilityIdentifiers</i>	94
Table E.1 – UDDI tModels.....	96
Table E.2 – LDAP object class schema.....	97
Table F.1 – Application Certificate store directory layout.....	98
Table H.1 – Verifying that a Server is allowed to provide Certificates	102
Table H.2 – Verifying that a Client is allowed to request Certificates	102

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OPC UNIFIED ARCHITECTURE –

Part 12: Discovery and global services

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65E/711/FDIS	65E/723/RVD

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- amended.

OPC UNIFIED ARCHITECTURE –

Part 12: Discovery and global services

1 Scope

This part of IEC 62541 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* management and *Authorization Services*.

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 62541-1, *OPC Unified Architecture – Part 1: Overview and concepts*

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 62541-9, *OPC Unified Architecture – Part 9: Alarms and conditions*

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

X.500: ISO/IEC 9594-1:2017, *Information technology – Open Systems Interconnection – The Directory – Part 1: Overview of concepts, models and services*

IETF RFC 1035, *DNS-Name: Domain Names – Implementation and Specification*
<http://www.ietf.org/rfc/rfc1035.txt>

IETF RFC 2986, *PKCS #10: Certification Request Syntax Specification*
<http://www.ietf.org/rfc/rfc2986.txt>

IETF RFC 3927, *Auto-IP: Dynamic Configuration of IPv4 Link-Local Addresses*
<http://www.ietf.org/rfc/rfc3927.txt>

IETF RFC 5958, *Asymmetric Key Packages*
<http://www.ietf.org/rfc/rfc5958.txt>

IETF RFC 6762, *mDNS: Multicast DNS*

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

IETF RFC 6763, *DNS-SD: DNS Based Service Discovery*

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

IETF RFC 7030: *Enrollment over Secure Transport*

<http://www.ietf.org/rfc/rfc7030.txt>

PKCS #12: *Personal Information Exchange Syntax*

<http://www.emc.com/emc-plus/rsa-labs/pkcs/files/h11301-wp-pkcs-12v1-1-personal-information-exchange-syntax.pdf>

DI: *OPC Unified Architecture for Devices (DI)*

<https://opcfoundation.org/developer-tools/specifications-unified-architecture/opc-unified-architecture-for-devices-di/>

ADI: *OPC Unified Architecture for Analyzer Devices (ADI)*

<https://opcfoundation.org/developer-tools/specifications-unified-architecture/opc-unified-architecture-for-analyzer-devices-adi/>

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<https://opcfoundation.org/developer-tools/specifications-unified-architecture/opc-unified-architecture-plcopen-information-model/>

FDI: *OPC Unified Architecture for FDI*

<https://opcfoundation.org/developer-tools/specifications-unified-architecture/opc-unified-architecture-for-fdi/>

ISA-95: *ISA-95 Common Object Model*

<https://opcfoundation.org/developer-tools/specifications-unified-architecture/isa-95-common-object-model/>

3 Terms, definitions, abbreviated terms and conventions

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC TR 62541-1, IEC TR 62541-2, IEC 62541-3, IEC 62541-4, IEC 62541-6 and IEC 62541-9 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1

Certificate Group

context used to describe the *Trust List* and *Certificate(s)* associated with an *Application*

3.1.2

Certificate Request

PKCS #10 encoded structure used to request a new *Certificate* from a *Certificate Authority*