

# ISO/IEC 29168-1:2023-03 (E)

## Information technology - Open systems interconnection - Part 1: Object identifier resolution system

---

<b>Contents</b>		<b>Page</b>
1	Scope .....	1
2	Normative references.....	1
2.1	Identical Recommendations   International Standards .....	1
2.2	Additional references .....	1
3	Definitions .....	2
3.1	Imported definitions .....	2
3.2	Additional definitions.....	2
4	Abbreviations and acronyms .....	4
5	OID resolution system architecture .....	5
5.1	OID resolution process.....	5
5.2	Interactions between components in the general OID resolution process .....	5
6	DNS zone files for the ORS domain.....	6
6.1	Overview.....	6
6.2	Requirements and restrictions on DNS zone files in the ORS domain .....	7
6.3	Use of DNS resource records for ORS services.....	7
6.4	Security considerations .....	8
7	Operation of an ORS client .....	8
7.1	Functional interfaces .....	8
7.2	Processing a query.....	8
7.3	Converting an OID-IRI value to an FQDN .....	8
7.4	Processing DNS results .....	9
7.5	Security considerations .....	9
7.6	Local performance considerations.....	9
8	Requirements for ORS service specifications .....	10
8.1	Specification of NAPTR information.....	10
8.2	Recommendations for ORS application processing .....	10
Annex A – Assigned ORS service types.....		11
Annex B – Specification of the canonical OID (COID) ORS service .....		12
Annex C – Specification of the child information (CINF) ORS service .....		13
C.1	General.....	13
C.2	CINF XML file .....	13
Annex D – Specification of the registration information (RINF) ORS service .....		15
D.1	General.....	15
D.2	RINF XML file .....	15
Annex E – Specification of the module information (MINF) ORS service.....		17
Annex F – Description of use cases.....		18
F.1	Canonical OID (COID) ORS service .....	18
F.2	Child information (CINF) ORS service .....	18
F.3	Registration information (RINF) ORS service.....	18
F.4	Module information (MINF) ORS service.....	18
Annex G – Examples of ORS operation.....		19
G.1	Example of DNS zone files for the ORS.....	19
G.2	Examples of NAPTR resource records.....	20

Annex H – Implementation guidance for a local cache and copies of ORS zones .....	21
H.1 Local cache for OID resolution .....	21
H.2 Local copies of ORS zones .....	21
H.3 Local copies of ORS zones independent of the local DNS .....	21
Annex I – Operational guidance for ORS operators .....	23
Annex J – Changes and compatibility of this edition of this Recommendation   International Standard .....	24
Annex K – History of object identifiers.....	25
Bibliography .....	26