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Information technology — Open systems interconnection —

Part 2:
Procedures for the object identifier resolution system operational agency

Technologies de l'information — Interconnection de systèmes ouverts (OSI) —

Partie 2: Procédures pour l'agence opérationnelle du système de résolution de l'identificateur d'objet

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 29168-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.

ISO/IEC 29168 consists of the following parts, under the general title *Information technology — Open systems interconnection*:

⎯ *Part 1: Object identifier resolution system*

⎯ *Part 2: Procedures for the object identifier resolution system operational agency*

Introduction

An introduction to the object identifier (OID) resolution system is provided in Rec. ITU-T X.672 | ISO/IEC 29168-1.

This part of ISO/IEC 29168 specifies the mechanisms and criteria to be applied for the selection and approval of the object identifier resolution system (ORS) operational agency. It also covers the procedures that the ORS operational agency is required to follow when managing the ORS.

The DNS zone files for .oid-res.org are required to provide ORS support for the root of the International Object Identifier tree.

These procedures include the appointment (or re-appointment) of the ORS operational agency (the operational agency).

The procedures require the operational agency to provide DNS zone file support for .oid-res.org, as well as for a specified set (see Clause 6) of top-level OID nodes [including DNSSEC (NSEC3) support for those zone files].

The operational agency is also required to support specified procedures (some, but not all, on a commercial basis) that enable the provision of ORS support for OID nodes beneath those that it is required to fully support (see Table 1).

Clause 5 specifies the approval mechanisms for the appointment of the operational agency and any necessary subsequent changes.

Clause 6 specifies the OID nodes to be supported by the operational agency.

Clause 7 specifies the nature of operational agency support.

Clause 8 addresses charging issues for services provided by the operational agency.

Information technology — Open systems interconnection —

Part 2:
Procedures for the object identifier resolution system operational agency

1   Scope

1.1   This part of ISO/IEC 29168 specifies the mechanisms and criteria to be applied for the selection and approval of the object identifier resolution system (ORS) operational agency, and includes procedures that the operational agency is required to follow.

1.2   It also addresses any future modification of the procedures, and the procedures for any change of the operational agency.

1.3   It lists the object identifier (OID) nodes for which the operational agency is required to provide ORS support.

1.4   It gives the required level of support for these nodes.

1.5   It gives the procedures by which lower-level nodes can apply for ORS support (class A, class B, or class C), and the role of the operational agency in providing these levels of support.

1.6   It determines the basis for charges that might be levied for these levels of support.

2   Normative references

The following referenced documents are indispensable for the application 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.

Rec. ITU-T X.660 series | ISO/IEC 9834 (all parts), *Information technology — Open Systems Interconnection — Procedures for the operation of OSI Registration Authorities*

Rec. ITU-T X.672 | ISO/IEC 29168-1, *Information technology — Open systems interconnection — Part 1: Object identifier resolution system*

3   Terms and definitions

3.1   Terms defined in Rec. ITU-T X.660 | ISO/IEC 9834-1

For the purposes of this document, the following terms defined in Rec. ITU-T X.660 | ISO/IEC 9834-1 apply.

a)   object identifier;

b)   International Object Identifier tree;

c)   long arc;

d)   OID internationalized resource identifier;

e)   Unicode label.

3.2   Terms defined in Rec. ITU-T X.672 | ISO/IEC 29168-1

For the purposes of this document, the following terms defined in Rec. ITU-T X.672 | ISO/IEC 29168-1 apply.

a)   DNS Delegation Name (DNAME);

b)   DNS Name Server (NS);

c)   DNS zone file;

d)   NAPTR resource records;

e)   operational agency procedures (procedures);

f)   ORS operational agency (the operational agency);

g)   ORS-supported OID node.

4   Abbreviated terms

DNAME	(DNS) Delegation Name
DNS	Domain Name System
NAPTR	(DNS) Naming Authority Pointer
NS	(DNS) Name Server
OID	Object Identifier
OID-IRI	OID Internationalized Resource Identifier
ORS	OID Resolution System

5   Appointment of the operational agency

5.1   Formal appointment

The operational agency is formally appointed as an ISO/IEC Registration Authority under the ISO/IEC JTC 1 procedures for such appointments.

5.2   Nominating bodies

When there is a vacancy for the operational agency, the request for nominations shall be sent to the ISO/IEC JTC 1/SC 6 Secretariat for posting, and nominations can be submitted by any ISO National Body or any IEC National Committee.

Nominations shall be sent to the ISO/IEC JTC 1/SC 6 Secretariat for the attention of the Expert Group (see 5.4).

5.3 Criteria for nominations and statements from nominees

Those making a nomination should note the following.

a) Eligible nominees are limited to national government agencies, private companies, charities, academic and research institutions within a country represented by an ISO National Body or IEC National Committee.

b) Nominations shall include a statement by the nominee (in free form) that (if appointed) they are prepared to be fully compliant with the procedures set out in this part of ISO/IEC 29168, and any subsequent revisions that are agreed by ISO/IEC processes.

c) nominations shall also include statements by the nominee (in free form) that:

1) gives their status and the legal jurisdiction(s) they are prepared to operate under;

2) gives evidence of expertise in the management of DNS zone files, including use of DNSSEC (NSEC3);

3) they are prepared to provide 24/7 technical and operational support for the ORS 365 days a year, and give evidence of that capability and their ability to rapidly recover from failure of the servers that they use to support the ORS;

4) any data obtained or used in the provision of this service will not be shared with any third party or used for any purpose other than for the provision of this service;

5) the domain name `.oid-res.org` used for this service will not be used for, or in conjunction with, any other service;

6) they have procedures in place to back-up and rapidly restore all relevant zone files in the event of failures of the DNS servers;

7) the right to provide a service under the registered domain name `.oid-res.org` remain with the relevant ISO/IEC committees;

8) if they cease to operate in this role (for whatever reason), they will do so in a way that is not disruptive to the provision of the service;

9) if taking over from an existing provider of the ORS service, they are capable of doing so in a way that is not disruptive to the provision of the service;

10) if disputes occur, they will accept any decision made by due process through the relevant ISO/IEC committees.

5.4 Selection and approval of an operational agency

5.4.1 Once nominations have been received for the operational agency, they shall be initially reviewed by an Expert Group consisting of:

⎯ the ISO/IEC JTC 1/SC 6/WG 9 Convenor;

⎯ the ITU-T SG 17 ASN.1 & OID Project Leader;

⎯ the Editor of the ISO/IEC 9834 multi-part standard;

⎯ the Editor of ISO/IEC 29168-1.

5.4.2   The Expert Group shall (in a timely manner after the closing date for nominations) consider the nominees and make (perhaps after further enquiry) a recommendation to ISO/IEC JTC 1/SC 6 for appointment of the operational agency.

5.4.3   The Expert Group shall produce a report listing all of the nominees, their recommendation for appointment of the operational agency, and a summary of their deliberations and reasons for their recommendation. The report shall be discussed within ISO/IEC JTC 1/SC 6/WG 9 and presented for ratification during the next plenary session of ISO/IEC JTC 1/SC 6.

5.5   Term of appointment

5.5.1   The selected nominee shall be appointed for a minimum period of three years.

5.5.2   Twelve months notice of any termination shall be given by any of the parties to the agreement. If there is no request by any of the parties to the agreement for termination of the appointment, it continues without further formality on an annual basis.

5.5.3   If there is a request by any of the parties to the agreement to terminate the appointment, these procedures shall be invoked to determine a new operational agency.

5.5.4   ISO/IEC JTC 1/SC 6 may undertake an annual review of the performance of the appointed operational agency and applicable procedures specified within this document, if they deem that necessary.

5.6   Transfer of .oid-res.org

5.6.1   There is agreement that the owner of `.oid-res.org` domain name prior to the appointment of the first operational agency will transfer that domain name free of charge to whatever organization is appointed to fulfil that role.

NOTE 1   This may involve requesting `.org` to change its DNS zone file record to point to a new server for the `.oid-res.org` zone files.

NOTE 2   There may be a further charge (to be paid by the new operational agency) to `.org` to support the signing of a new public key to provide DNSSEC (NSEC3) support, as is required by Rec. ITU-T X.672 | ISO/IEC 29168-1.

5.6.2   It is a requirement that any appointed operational agency that is replaced as specified in Clause 5 will also provide such a transfer of ownership of `.oid-res.org` free of charge.

6   OID nodes to be supported by the operational agency

Table 1 lists the OID nodes to be supported by the operational agency. There are long arcs and Unicode labels associated with some of these OID nodes. These can be determined from past ITU-T SG 17 and ISO/IEC JTC 1/SC 6 Resolutions, and from Rec. ITU-T X.660 | ISO/IEC 9834-1, and are not listed here. Only the canonical identification is given in Table 1.

OID-IRI	Comment on ORS support (see Clause 7)
Root	Fully supported, for all current and new children (including current and new long arcs) and all Unicode labels to children. It is not expected that there will ever be nodes /*n* for values of *n* above 2
/0	Fully supported.
/0/0	Fully supported.
/0/0/*n*	Fully supported for all current (*n* = 1 to 26, representing the A to Z*z* series of Recommendations) OID nodes and supported for new children (none expected). Support available for all subsequent child OID nodes under class C, B or A provision (see 7.2).
/0/1	Support not needed – obsolete.
/0/2	Fully supported. Support available for all subsequent child OID nodes under class C, B or A provision.
/0/3	Fully supported. Support available for all subsequent child OID nodes under class C, B or A provision.
/0/4	Fully supported. Support available for all subsequent child OID nodes under class C, B or A provision.
/0/5	Fully supported. Support available for all subsequent child OID nodes under class C, B or A provision.
/1	Fully supported.
/1/0	Fully supported. Support available for all subsequent child OID nodes under class C, B or A provision.
/1/1	No support required, unless there is a formal request for support of a child node (/1/1/*n*), under class C, B or A provision, in which case /1/1 shall then be given class C support, and the request shall given class C, B or A provision. If no such request is made, a DNS request for /1/1 will produce an error return.
/1/2	Fully supported. Support available for all subsequent child OID nodes under class C, B or A provision.
/1/3	Fully supported. Support available for all subsequent child OID nodes under class C, B or A provision.
/2	Fully supported. Support available for all subsequent child OID nodes under class C, B or A provision.
/2/*n*	Fully supported for all *n* that are approved in accordance with Rec. ITU-T X.662	ISO/IEC 9834-3 (new values of *n* are expected to be approved at most twice a year). Support available for all subsequent child OID nodes under class C, B or A provision.

Table 1 — OID nodes to be supported by the operational agency