

DEFECT REPORT FORM

1. Defect Report Number: 9594/272

Title: Certification Path Length

2. Source: X.509 editor

3. Addressed to:

- 4. (a)
- (b)

5. Date circulated by WG Secretariat:

6. Deadline for Response from Editor:

7. Defect Report Concerning:

ITU-T X.509 (1997 and 2000 editions) | ISO/IEC 9594-8:1997 and 2000 editions

8. Qualifier: Clarification

9. References in Document:

3rd edition, 1997 (clause 12.4.2.1) & 4th edition, 2000 (clause 8.4.2.1 and clause 15.5.2.1)

10. Nature of Defect:

The relationship between the length of an attribute certificate delegation path and the value of **pathLenConstraint** in **basicAttrConstraints** as well as the relationship between the length of a public-key certification path and the value of **pathLenConstraint** in **basicConstraints** extension requires clarification. In the attribute certificate case, it needs to be more clearly stated that the constraint applies ONLY to subsequent certificates and does not control the number of certificates that can appear in a delegation path prior to one containing the constraint. For public-key certificates, this same clarification is required as well as more general clarification (along the lines of text that already exists for delegation paths).

11. Solution Proposed by the Source:

*In clause 12.4.2.1 (3rd edition) and clause 8.4.2.1 (4th edition), add the following text to the end of the paragraph that begins with “The **pathLenConstraint** component shall be present only if...”*

The constraint takes effect beginning with the next certificate in the path. The constraint restricts the length of the segment of the certification path between the certificate containing this extension and the end-entity certificate. It has no impact on the number of CA-certificates in the certification path between the trust anchor and the certificate containing this extension. Therefore, the length of a complete certification path may exceed the maximum length of the segment constrained by this extension. The constraint controls the number of non self-issued CA certificates between the CA certificate containing the constraint and the end-entity certificate. Therefore the total length of this segment of the path, excluding self-issued certificates, may exceed the value of the constraint by as many as two certificates. (This includes the certificates at the two endpoints of the segment plus the CA certificates between the two endpoints that are constrained by the value of this extension.)

In clause 15.5.2.1 (4th edition), In the paragraph that begins with “The pathLenConstraint component is meaningful only if...”, replace the last two sentences of this paragraph with the following:

The constraint restricts the length of the segment of the delegation path between the certificate containing this extension and the end-entity certificate. It has no impact on the number of AA-certificates in the delegation path between the trust anchor and the certificate containing this extension. Therefore, the length of a complete delegation path may exceed the maximum length of the segment constrained by this extension. The constraint controls the number of AA certificates between the AA certificate containing the constraint and the end-entity certificate. Therefore the total length of this segment of the path may exceed the value of the constraint by as many as two certificates. (This includes the certificates at the two endpoints of the segment plus the AA certificates between the two endpoints that are constrained by the value of this extension.)

12. Editor's Response:

Accepted solution proposed by source