Title: Proposed USA Comment on ISO 10589 Defect Report

Source: IBM

Reference: SC6 N7535 (X3S3.3 92-296)

IBM has reviewed the defect report for ISO 10589, and has found no technical problems with the proposed solutions. However, we noted that the proposed solution for item 4 ("Conflict in Handling of the QoS option for Encapsulation"), although technically correct, does imply that an implementer would need to perform some superfluous operations. Therefore, we propose that the USA submit the comments on page 2 as its ballot response to item 4 of the Defect Report.

Problem:

The suggested text to resolve defect number 4 (Conflict in the Handling of the QoS Option for Encapsulation) outlines a specific conformant implementation rather, but does not state the underlying normative requirement.

Rationale:

The solution proposed for defect 4 in SC6 N7535 would result in new text for item d) 1) of clause 7.2.10.4 of ISO 10589 which would read as follows:

> *Copy the QoS Maintenance field (if present in the encapsulated PDU) to the encapsulating PDU. Change the field to indicate routeing by the Default routeing metric if necessary. If the ISO 8473 PDU does not contain a QoS Maintenance field, the IS shall include the QoS Maintenance field in the encapsulating PDU and indicate routeing by the default routeing metric.*

This text appears in a list introduced by the words ″...the IS shall″, and hence requires an IS to perform three operations: a) copy the QoS field, b) change the QoS metric to ″default″ if it is not already equal to that value, and c) add a QoS metric with value ″default″ if the encapsulated PDU contained no QoS metric.

Regardless of the presence, absence, or value of the Q0S field in the inner (encapsulated) PDU, these steps in all cases lead to a single possible end result—the header of the encapsulating (outer) PDU must indicate routeing according to the ″default″ metric. Hence, the ″copy″, ″check″, and ″add″ steps are in fact only one possible way to achieve the actual normative requirement, which is that the header of the outer (encapsulating PDU) shall indicate routeing by the default QoS metric. For example, another possible implementation could be to include no QoS parameter at all in the outer header, since according to ISO 10589, 7.4.2.a, this will also result in routeing according to the ″default″ metric.

Proposed Solution:

Clause 7.2.10.4, item d) 1) should be recast in terms of the normative requirement, rather than outlining one possible method for satisfying that requirement. We propose that the existing text of clause 7.2.10.4, item d) 1) be replaced by the following new text:

> *insure that the header of the encapsulating PDU indicates routeing by the default metric. Routeing by the default metric can be indicated either by including a QoS field with its bits set in accordance with Table 1, or by carrying no QoS field at all (see 7.4.2, item ″a″).*

A similar change is also needed in clause 7.4.3.2, changing the next-to-last sentence (″Set the QoS Maintenance...″) to read:

> *Set the header of the outer PDU to indicate forwarding via the default routeing metric (see 7.2.10.4, item ″d″).*