Problem/Issue Identification and Description

**Submittal Date** (mm/dd/yyyy): 06/04/2025 **PIM # 160**

**Company(s) Submitting Issue**: iconectiv

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**(NOTE: Submitting Company(s) is to complete this section of the form along with Sections 1, 2 and 3.)**

1. **Problem/Issue Statement:** (Brief statement outlining the problem/issue.)

During the April 7th NPIF Architecture Planning Team (APT) meeting, the LNPA took an action item to draft a PIM to propose language to clarify the current FRS transactions/second (TPS) rate requirements regarding how the TPS requirements apply for Service Bureau/Primary SPIDs that may have one or more secondary SPIDs. These TPS requirements in the FRS indicate that the transaction rate for the SOA-to-NPAC SMS interface and the NPAC SMS-to-Local SMS interface is defined per “association”, which is a construct/term that applies to CMIP interface but should be updated to apply generically across any mechanized interface. See also the GUST (Giddy Up Sub-Team) Readout APT – May 22, 2024: Page 3 - Current requirements are silent or require clarification on certain key tps related topics: clarification required a) Service Bureau / Primary SPID and its Secondary SPIDs.

1. **Problem/Issue Description:** (Provide detailed description of problem/issue.)

A. Examples & Impacts of Problem/Issue:

Current FRS TPS requirements indicate that the transaction rate for the SOA-to-NPAC SMS interface and the NPAC SMS-to-Local SMS interface is defined per “association”. An association is a concept introduced by the CMIP interface whereby the following rules apply:

a) Each active connection between a primary SOA SPID and the NPAC SMS or an LSMS SPID and the NPAC SMS constitutes an “association” (see IIS Section 5.2.1.1).

b) A single SPID / system type may create multiple associations to the NPAC SMS; however, this is not done in practice.

c) Even if a primary SOA SPID elected to create multiple associations, each association is limited to a set of authorized and requested functions that may not overlap with any other association for the primary SOA SPID (see IIS Section 5.6). At a high level, the SOA functions are

- Requests/Notifications for Audits, Number Pool Blocks, and Subscription Versions

- Requests to the NPAC SMS for management of Network Data and Customer objects

- Download of Network Data from the NPAC SMS to the SOA

d) Because of the prohibition of associations with overlapping functions, each CMIP SOA is effectively limited to a single association for Audit, Number Pool Block, and Subscription Version requests/notifications, which constitute the vast majority of transactions to/from the NPAC SMS for any primary SOA SPID.

The following are the current TPS requirements that refer to “associations”, which should be clarified to accommodate any mechanized interface by referring to Primary SPIDs instead.

Existing non-aggregate SOA requirements:

**R6-28.1 SOA to NPAC SMS interface transaction rates - sustained**

A transaction rate of 7.0 CMIP/XML transactions (sustained) per second shall be supported by each SOA-to-NPAC SMS interface association. The SOA-to-NPAC SMS interface transactions consist of “Active-like” requests that cause LSMS transactions, “Pending-like” requests that do not cause LSMS transactions, and notifications sent from NPAC SMS to SOA. Since “Active like” SOA-to-NPAC SMS transactions result in LSMS transactions, it is expected that these transactions do not cause the LSMS transaction rates to exceed the requirements defined in RR6-108 NPAC SMS-to-Local SMS interface transaction rates – sustained and RR6-109 NPAC SMS-to-Local SMS interface transaction rates – total bandwidth.

**R6-28.2 SOA to NPAC SMS interface transaction rates - peak**

NPAC SMS shall support a rate of 10.0 CMIP/XML transactions per second (peak for a five minute period, within any 60 minute window) over a single SOA-to-NPAC SMS interface association. The SOA-to-NPAC SMS interface transactions consist of “Active-like” requests that cause LSMS transactions, “Pending-like” requests that do not cause LSMS transactions, and notifications sent from NPAC SMS to SOA. Since “Active like” SOA-to-NPAC SMS transactions result in LSMS transactions, it is expected that these transactions do not cause the LSMS transaction rates to exceed the requirements defined in RR6-108 NPAC SMS-to-Local SMS interface transaction rates – sustained and RR6-109 NPAC SMS-to-Local SMS interface transaction rates – total bandwidth.

Existing non-aggregate LSMS requirement:

**RR6-108 NPAC SMS-to-Local SMS interface transaction rates – sustained**

NPAC SMS shall support a rate of 7.0 CMIP/XML transactions per second (sustained) over each NPAC SMS-to-Local SMS interface association. (previously NANC 393, NewReq 2)

B. Frequency of Occurrence:

N/A.

1. NPAC Regions Impacted:

 Mid Atlantic \_\_\_ Midwest\_\_\_ Northeast\_\_\_ Southeast\_\_\_ Southwest\_\_\_ Western\_\_\_

 West Coast\_\_\_ ALL  **X\_**

D. Rationale why existing process is deficient:

The use of the “association” concept in the current TPS FRS requirements does not adequately apply to both the CMIP and XML interfaces, and has caused confusion with how the requirements apply to Primary SPIDs vs. Secondary SPIDs.

E. Identify action taken in other committees / forums:

N/A

F. Any other descriptive items:

N/A

1. **Suggested Resolution:**

The language in the TPS FRS requirements noted above could be clarified as follows to eliminate use of the term “association” and instead refer to Primary SPID (for SOA mechanized interfaces) and LSMS SPID (for LSMS mechanized interfaces). Note that the concept of Primary and Secondary SPIDs does not apply to the LSMS interface.

For the existing SOA requirements:

A transaction rate of 7.0 CMIP/XML transactions (sustained) per second shall be supported over the SOA-to-NPAC SMS interface on a per-primary SPID basis.

NPAC SMS shall support a rate of 10.0 CMIP/XML transactions per second (peak for a five minute period, within any 60 minute window) over the SOA-to-NPAC SMS interface on a per-primary SPID basis.

For the existing LSMS requirement:

NPAC SMS shall support a rate of 7.0 CMIP/XML transactions per second (sustained) over the NPAC SMS-to-Local SMS interface for each LSMS SPID.

1. **Final Resolution:**

**NPIF (only)**

PIM #: 160 Final Resolution Date:

Related Documents:

Issue Resolution Referred to:

Why Issue Referred: