**NANC 299**

**NPAC Monitoring of SOA and LSMS Associations via Heartbeat**

**Origination Date :**09/15/1999

**Originator:**LNPA-WG

**Description:**

This is an extension of NANC 219 and NANC 301.  Instead of utilizing a TCP Heartbeat and an abort message, the NPAC SMS would utilize an application level heartbeat message on every association.  If a response was not returned for any given application level heartbeat message, an alarm would be initiated for NPAC Personnel.

Oct LNPAWG (KC), this change order is designed to establish the application level heartbeat process (which requires an interface change to both the NPAC and the SOA/LSMS).  This process will allow two-way communication and allow either side to initiate the application level heartbeat message.  The application level heartbeat process should be set up so that the functionality can be optionally set up per association.

The alarming process is the same as 219, such that an alarm would be initiated whenever application level heartbeat responses are not sent by the NPAC or SOA/LSMS.  When these alarms occur, the NPAC Personnel would contact the affected Service Provider to work the problem and ensure the association is brought back up.

**Final Resolution:**

Func Backwards Compatible:  NO

The current working assumption is that this heartbeat would be a new message, it would not have any access control, it would be at a low level in the protocol stack, this heartbeat would occur on the same port as the association, this message would only occur if no traffic was sent/received after a configurable period of time, and this heartbeat would be two-way to allow either side to initiate this message.

All parties still need to examine if there might be an issue with filtering in their firewalls.

The need for both a network level heartbeat and application level heartbeat still needs to be decided.

**Jan ‘00 LNPAWG** meeting, the group has not been able to determine the feasibility of implementing an application level heartbeat.  It was agreed to put this change order on hold, pending the outcome of NANC 301 (NPAC TCP Level Heartbeat [transport layer]).  The functionality documented in this change order needs further review before this change order can be considered “accepted and ready for selection into a release”.

**May ‘00 LNPAWG** (Atlanta), leave open until further analysis of NANC 219 and NANC 301 (i.e., after R4 implementation).

**June ‘00 LNPAWG** meeting, group consensus (during R5 discussion) is to move to cancel-pending.

**July 2000 meeting** – LNPA WG consensus is that they do not want to cancel this change order but move it back to an accepted change order for a future release.  Metrics and reports that will be provided after R4.0 will give more information to determine whether or not this change order is needed.

Implemented in FRS 3.3.0a, IIS3.3.0a, GDMO 3.3.0 and ASN.1 3.3.0.

**Related Release:**

Implemented in FRS 3.3.0a, IIS3.3.0a, GDMO 3.3.0 and ASN.1 3.3.0.

**Status:** Implemented