Troubleshoot RCM Based Standby UPF Session Manager Socket Ready

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Introduction

This document describes Standby UPF Session Manager tasks lacking socket connection to corresponding rcm-checkpointmgr pods in RCM-based deployment.

Background Information

This document addresses occasional Standby User Plane Function (UPF) Session Manager tasks which have Socket Ready issues; lacking socket connection to corresponding rcm-checkpointmgr pods in Redundancy Configuration Manager (RCM)-based UPF deployment.

Problem

In Standby UPF, Session manager task instance 10 has no socket connection to rcm-checkpointmgr pod.

```
[local]UPF# show rcm checkpoint statistics verbose
 smgr       state  peer     recovery  pre-alloc  chk-point rcvd   chk-point sent
 inst              conn     records   calls      full   micro    full    micro
 ----     -------  -----    -------   --------   -----  -----    -----    ----
    1       Stby Ready        0         0         0      0        0        0
    2       Stby Ready        0         0         0      0        0        0
    3       Stby Ready        0         0         0      0        0        0
    4       Stby Ready        0         0         0      0        0        0
    5       Stby Ready        0         0         0      0        0        0
    6       Stby Ready        0         0         0      0        0        0
    7       Stby Ready        0         0         0      0        0        0
    8       Stby Ready        0         0         0      0        0        0
    9       Stby Ready        0         0         0      0        0        0
   10       Stby              0         0         0      0        0        0
   11       Stby Ready        0         0         0      0        0        0
   12       Stby Ready        0         0         0      0        0        0
   13       Stby Ready        0         0         0      0        0        0
   14       Stby Ready        0         0         0      0        0        0
   15       Stby Ready        0         0         0      0        0        0
   16       Stby Ready        0         0         0      0        0        0
   17       Stby Ready        0         0         0      0        0        0
   18       Stby Ready        0         0         0      0        0        0
   19       Stby Ready        0         0         0      0        0        0
   20       Stby Ready        0         0         0      0        0        0
   21       Stby Ready        0         0         0      0        0        0
```

```
22       Stby Ready       0       0     0     0     0     0
```

Solution

Current Workaround :

- To address the socket communication issue between Standby UPF Session Manager and its rcm-checkpointmgr pod:
- Log in to the corresponding Standby UPF.
- Enter debug mode (**cli test-commands password <password>**).
- Execute '**task kill facility sessmgr instance <instance-id>**' for the affected session manager task without a socket connection to rcm-checkpointmgr.
- Wait for a minute, then verify that the Session Manager task now has a stable socket connection in the Ready state.
- If the issue persists, consider rebooting the Standby UPF and recheck after the UPF is fully operational.

Permanent Fix:

- You can explore implementing TCP hardening feature in your deployment. This feature introduces a Heartbeat mechanism between Session Manager tasks and rcm-checkpointmgr pods, ensuring the socket connection is re-established as needed. For details, refer to [Redundancy Configuration Manager -Configuration and Administration Guide, Release 2022.04](#) .