

# FEPS (Functional Endpoint Proxy Server) for BCM 2.5 Feature Pack 1 and BCM 2.5 Feature Pack 1 Maintenance Release 1.1

## Patch Description:

The purpose of this patch is to apply a new FEPS (Functional Endpoint Proxy Server) to a BCM 2.5 Feature Pack 1 and Feature Pack 1 Maintenance Release 1.1 system.

## ROOT CAUSE

- Assume system A, with only 4 lines, has all VoIP lines tied up with legitimate calls.
- System B calls System A and passes an MCDN payload to System A in the call SETUP message
- System A has no VoIP lines free (all 4 are already in use), so it responds with RELEASE COMPLETE [ Resource Unavailable ]

## <<< ORIGINAL BUG >>>

- System A's RELEASE COMPLETE echoes back the MCDN payload that was received in the original SETUP
- This MCDN payload confuses the Core on system B, leading it to believe that there is an incoming SETUP
- The confused Core on System B does not release the VoIP line used to make the call, so the line stays tied-up on System B
- The user on System B dials System A again
- The same bug occurs, which causes yet another VoIP line on System B to be tied-up
- This is repeated until all VoIP lines on System B are tied-up
- System C attempts to call System B (which is now all locked-up)
- System B does the same thing as System A did, when all of System A's lines were tied up - i.e. respond with RELEASE COMPLETE [ RESOURCE UNAVAILABLE ] + Echoed MCDN
- Now a VoIP line on System C stays tied-up

This scenario repeats until all VoIP lines on System C are tied-up

In this manner, system-by-system, the lockup backs its way through the entire network.

## THE SOLUTION

The FEPS patches that were delivered for BCM 2.5 FP1 and BCM 2.5 FP1 MR eliminate the

problem of echoing back received MCDN, thus eliminating the confusion to the Core at the originating end. Now, rejected calls are released correctly by both ends.

The scenario described above can be easily reproduced by re-enabling MCDN (SL-1 ) on the customer's non-patched systems and running through the described steps.

**CR's Resolved:**

- Q00573924: BCM 2.5 FP1 Receiving "No Free Lines" on IP Trunks