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## Introduction

This document describes a solution to recover DSL modems, IPv4 only in dual-stack environment, disconnected while it terminates on ASR1000 series router.

## Problem

DSL modems disconnected were due to missing PPP keep-lives after enabled IPv6(IPv6CP) on LNS device.

ASR1000 as LNS is constantly sending out IPv6CP messages to CPE device. This is the behaviour as per RFC 1661. It tries to negotiate with its peer; if the peer cannot understand IPv6CP. The peer should send PROTREJ, which LNS will not try to negotiate IPV6CP.

Such constant IPv6CP messages can cause legacy IPv4-only modems to stop sending keep-alives to the LNS, resulting in session disconnection.

## Solution

You can stop the constant IPv6CP messages via the following configuration on Virtual-Template interface.

```
1. ppp ncp passive ipv6cp
# LNS will negotiate ipv6 only if initiated by client.
```

Alternative option:

```
1. ppp ncp override local
#This command tracks attributes received in authorization from RADIUS, verify the permitted Network Control Program (NCP), reject the current NCP negotiation, and override the local dual-stack configuration
```