

AR18-20在VRP3.40-0009内存泄漏问题的解决方法

一、 组网:

无。

二、 问题描述:

AR18-20经常出现网络中断问题, 出现问题后设备对命令行基本不响应。

比如

<AR18-20>display current

% Error: match string

必须手动重启才能恢复。

AR18-20版本: VRP3.40, Release RT-0009

三、 过程分析:

首先需要确认现场问题是内存泄漏问题还是内存空闲链被写坏问题, 先用如下方法收集内存渐进信息已确认是否内存泄漏。

注意: 如果内存泄漏不是很快, 下面给出的操作需要反复执行, 至少一天分不同时段执行3-5次, 收集2-3天的信息才有分析的价值。

定位内存泄漏的步骤如下:

- 1. 在不同时间段查看系统内存, 如果第三列used, 有哪个字节块的内存存在不停增长, 有可能就是它在丢内存。

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[AR1820]_h

[AR1820-hidecmd]_dis memory

Slice Memory Usage:

Block Size	32	Free	619	Used	75364	Total	75983
Block Size	64	Free	208	Used	45656	Total	45864
Block Size	128	Free	1	Used	8739	Total	8740
Block Size	256	Free	78	Used	2217	Total	2295
Block Size	512	Free	1	Used	92	Total	93
Block Size	1024	Free	8	Used	258	Total	266
Block Size	2048	Free	47	Used	313	Total	360
Block Size	4096	Free	0	Used	69	Total	69

Block Size 64 Free 208 Used 45656 Total 45864

Block Size 128 Free 1 Used 8739 Total 8740

Block Size 256 Free 78 Used 2217 Total 2295

Block Size 512 Free 1 Used 92 Total 93

Block Size 1024 Free 8 Used 258 Total 266

Block Size 2048 Free 47 Used 313 Total 360

Block Size 4096 Free 0 Used 69 Total 69

-----Summary-----

Used(Byte) 8254720 Free 962 Used 132708 Total 133670

Total Slice Allocated Size: 13195776 bytes Used Ratio: 62

Total Slice Memory(Include Control Data and Free Slice): 13195776 bytes

Raw Slice Memory Usage:

Total Used Size: 7020184 bytes Num: 51

Total Raw Slice Size (Include Control Data and Free Slice): 7050768 bytes Use

d Ratio: 99

System Total Memory(bytes): 32360064

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[AR1820-hidecmd]_dis memory

Slice Memory Usage:

Block Size	32	Free	620	Used	138905	Total	139525
Block Size	64	Free	123	Used	45735	Total	45858
Block Size	128	Free	4	Used	8738	Total	8742
Block Size	256	Free	68	Used	2217	Total	2285
Block Size	512	Free	1	Used	106	Total	107
Block Size	1024	Free	8	Used	258	Total	266
Block Size	2048	Free	15	Used	313	Total	328
Block Size	4096	Free	0	Used	70	Total	70

Block Size 64 Free 123 Used 45735 Total 45858

Block Size 128 Free 4 Used 8738 Total 8742

Block Size 256 Free 68 Used 2217 Total 2285

Block Size 512 Free 1 Used 106 Total 107

Block Size 1024 Free 8 Used 258 Total 266

Block Size 2048 Free 15 Used 313 Total 328

Block Size 4096 Free 0 Used 70 Total 70

-----Summary-----

Used(Byte) 10304224 Free 839 Used 196342 Total 197181

Total Slice Allocated Size: 17326848 bytes Used Ratio: 59

Total Slice Memory(Include Control Data and Free Slice): 17326848 bytes

Raw Slice Memory Usage:

Total Used Size: 7020184 bytes Num: 51

Total Raw Slice Size (Include Control Data and Free Slice): 7050768 bytes Use
d Ratio: 99

System Total Memory(bytes): 32360064

可见32字节的内存块在丢内存, 该内存Used 持续增加, 并且再不停的申请空间, 始终不减少。

2. 针对问题内存块, 查看是哪个MID申请内存过多导致。以这个问题为例, 用display memory 32 group, 看看是哪个MID申请内存过多。很明显是由于MID为0395的模块消耗内存过多。

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```
[AR1820-hidecmd]_dis memory 32 group
(0060, 1) (c000, 5) (0170, 103) (0171, 834)
(dd35, 1) (0150, 38988) (0395, 31391) (0350, 6)
(0175, 315) (0392, 12) (0173, 6) (0117, 1)
(0164, 1) (0880, 6) (020a, 2) (0119, 7)
(0050, 1) (0180, 260) (0200, 11) (0201, 2)
(0407, 3237) (041a, 1) (0133, 4) (0220, 14)
(017d, 2) (0007, 2) (0141, 200) (0135, 4)
(0394, 2) (0208, 1) (0012, 1) (0000, 0)
```

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```
[AR1820-hidecmd]_dis memory 32 group
(0060, 1) (c000, 5) (0170, 103) (0171, 834)
(dd35, 1) (0150, 38988) (0395, 95046) (0350, 6)
(0175, 355) (0392, 12) (0173, 12) (0117, 1)
(0164, 1) (0880, 6) (020a, 2) (0119, 7)
(0050, 1) (0180, 260) (0200, 11) (0201, 2)
(0407, 3237) (041a, 1) (0133, 4) (0220, 14)
(017d, 2) (0007, 2) (0141, 200) (0135, 4)
(0394, 2) (0208, 1) (0012, 1) (0000, 0)
```

```
[AR1820-hidecmd]_dis memory 32 group
(0060, 1) (c000, 5) (0170, 103) (0171, 834)
(dd35, 1) (0150, 39016) (0395, 108689) (0350, 6)
(0175, 751) (0392, 12) (0173, 36) (0117, 1)
(0164, 1) (0880, 6) (020a, 2) (0119, 7)
(0050, 1) (0180, 260) (0200, 11) (0201, 2)
(0407, 3237) (041a, 1) (0133, 4) (0220, 14)
(017d, 2) (0007, 2) (0141, 200) (0394, 2)
(0135, 4) (0208, 1) (0012, 1) (0000, 0)
```

现在可以确定是0395模块在丢。

3. 然后再执行命令_dis memory 32 group [num] 收集信息, 如此研发就能定位是哪个具体模块在丢内存。

```
[hueirenyiyuan-hidecmd]_dis memory 32 group 0395
(00024, 43357)
```

```
[hueirenyiyuan-hidecmd]_dis memory 32 group 0395
(00024, 43425)
```

四、 解决方法:

问题的根源是DVPN模块处理某些报文不合理导致内存泄漏。由于目前网络中使用的是DVPN一期, 该版本存在大量问题, 并且已经不再开发, 因此和用户沟通升级到DVPN二期。通过对VRP3.40, Release 0108验证测试, 没有存在此问题。可以协调用户升级到版本VRP3.40, Release 0108。