

# 排除缓冲泄漏故障

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## Introduction

缓冲泄漏是Cisco IOS软件Bug。有两缓冲泄漏：

- 楔形接口缓冲区泄漏。
- 系统缓冲泄漏。

为了排除缓冲泄漏故障，您必须识别的缓冲泄漏的种类您遇到。在这种情况下**show interfaces**和**show buffer**命令是非常有用的。

如果有**show interfaces**的输出和从您的Cisco设备的**show buffer**命令，您能使用[Cisco CLI分析器](#)显示潜在问题和修正。要使用[思科 CLI 分析器](#)，您必须是[注册](#)客户、已登录并已启用 JavaScript。

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

### [Conventions](#)

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

## 楔形接口缓冲区泄漏

楔形接口缓冲区泄漏造成接口的输入队列充满至能不再接受信息包的点。在一些特定的流量情况下，在接口的输入队列变得楔住或，换句话说，输入队列计数大于队列深度。

这是输出示例**show interfaces**命令的，表示，接口被楔住：

```
Ethernet0/0 is up, line protocol is up
Output queue 0/40, 0 drops; input queue 76/75, 1250 drops
```

这样缓冲泄漏的症状是一个完整输入队列(76/75)。这里，值76和75表示信息包的数量在输入队列的和输入队列的最大大小，分别。在这种情况下，信息包的数量在输入队列的大于队列深度。这称为“楔入接口”。当接口被楔住时，路由器不再转发来自受影响接口的数据流。

请重新载入路由器释放输入队列和恢复数据流，直到队列再满。这能采取任何地方在一些秒钟和几周之间，根据泄漏的严重性。

**警告：** 在您重新载入路由器前，请保证您收集所有必要信息识别罪犯。

请使用这些命令识别缓冲泄漏的来源：

- **show buffers pool [pool name] [packet/header]**
- **show buffers old** (请使用此命令，只有当**调试充分**是启用的。**Note: debug sanity**命令在多数Cisco IOS软件版本被隐藏。有**调试充分**功能，在系统使用的每个缓冲区充分检查，当分配时，并且再，当被释放时。**Note: 您**必须发出**debug sanity**命令在privileged EXEC模式(特权模式)下。虽然此命令使用若干CPU容量，不极大影响路由器的功能。类似其他调试指令，**调试充分**在配置没有被保存。所以，此命令不会生存系统的重新启动。**Note: 为了**禁用充分检查，请使用privileged exec命令**undebuf充分**。)
- **分配的show buffer**

## 系统缓冲泄漏

此部分讨论系统缓冲泄漏。

这是输出示例**show buffers**命令的，在其中一指示缓冲泄漏系统缓冲缓冲池中：

```
Ethernet0/0 is up, line protocol is up
Output queue 0/40, 0 drops; input queue 76/75, 1250 drops
```

此**show buffers**命令输出指示在中间缓冲池的缓冲泄漏。有在路由器的总共20825个中间缓冲区，并且仅286在自由列表。这暗示某个进程采取所有缓冲区，但是不返回他们。

此种缓冲泄漏的其他症状是"%SYS-2-MALLOCFAIL"存储池处理器或输入-输出的(I/O)错误信息，根据平台。

请使用这些命令识别缓冲泄漏的来源：

- **show buffers old** (请使用此命令，只有当**调试充分**是启用的。**Note: debug sanity**命令在多数Cisco IOS软件版本被隐藏。有**调试充分**功能，在系统使用的每个缓冲区充分检查，当分配时，并且再，当被释放时。**Note: 您**必须发出**debug sanity**命令在privileged EXEC模式(特权模式)下。虽然此命令使用若干CPU容量，不极大影响路由器的功能。类似其他调试指令，**调试充分**在配置没有被保存。所以，此命令不会生存系统的重新启动。**Note: 为了**禁用充分检查，请使用privileged exec命令**undebuf充分**。)

- **show buffers pool [pool name] [packet/header]**
- 分配的show buffer

## 故障排除提示

缓冲泄漏是Cisco IOS软件Bug。为了修复已知缓冲泄漏Bug，升级到在您的版本系列的新版本。例如，如果当前运行Cisco IOS软件版本11.2(14)，对最新的11.2(x)镜像的升级。如果这不帮助，或者，如果升级路由器是不可能的，请与Cisco TAC联系，并且提供工程师相关**show buffer**命令的输出和输出的**show tech-support**命令。

这是帮助您的一些提示识别导致缓冲泄漏的信息包：

- 当您发现缓冲泄漏，请使用相关的**show buffer**命令查找在使用许多缓冲区的信息包的一个模式。
- 当您识别信息包时的种类，请设法搞到解决方案防止泄漏(例如，请使用一访问列表过滤那些信息包)。

这是从关联的输出示例显示命令：

```
Router#show interface ethernet 0/0
Ethernet0/0 is up, line protocol is up
  Hardware is AmdP2, address is 0050.3ee8.4060 (bia 0050.3ee8.4060)
  Internet address is 10.200.40.37/22
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec, rely 255/255, load 1/255
  Encapsulation ARPA, loopback not set, keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:51, output 00:00:08, output hang never
  Last clearing of "show interface" counters never
  Queueing strategy: fifo
  Output queue 0/40, 0 drops; input queue 76/75, 1250 drops
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    15686 packets input, 2872866 bytes, 0 no buffer
    Received 15342 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    0 input packets with dribble condition detected
    10352 packets output, 1031158 bytes, 0 underruns
    0 output errors, 0 collisions, 3 interface resets
    0 babbles, 0 late collision, 2 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
```

```
Router#show buffers old
```

Header	DataArea	Pool	Rcnt	Size	Link	Enc	Flags	Input	Output
80F09828	1A00084	Small	1	54	11	11	201	Et0/0	None
80F09A34	1A001C4	Small	1	54	11	11	201	Et0/0	None
80F09C40	1A00304	Small	1	54	11	11	201	Et0/0	None
80F09E4C	1A00444	Small	1	54	11	11	201	Et0/0	None
80F0A058	1A00584	Small	1	54	11	11	201	Et0/0	None
80F0A264	1A006C4	Small	1	54	11	11	201	Et0/0	None
80F0A470	1A00804	Small	1	54	11	11	201	Et0/0	None
80F0A67C	1A00944	Small	1	54	11	11	201	Et0/0	None
80F0A888	1A00A84	Small	1	54	11	11	201	Et0/0	None
80F0AA94	1A00BC4	Small	1	54	11	11	201	Et0/0	None
80F0ACA0	1A00D04	Small	1	54	11	11	201	Et0/0	None
80F0AEAC	1A00E44	Small	1	54	11	11	201	Et0/0	None

80F0B0B8	1A00F84	Small	1	54	11	11	201	Et0/0	None
80F0B2C4	1A010C4	Small	1	54	11	11	201	Et0/0	None
80F0B4D0	1A01204	Small	1	54	11	11	201	Et0/0	None
80F0B6DC	1A01344	Small	1	54	11	11	201	Et0/0	None
80F0B8E8	1A01484	Small	1	54	11	11	201	Et0/0	None
80F0BAF4	1A015C4	Small	1	54	11	11	201	Et0/0	None
80F0BD00	1A01704	Small	1	54	11	11	201	Et0/0	None
80F0BF0C	1A01844	Small	1	54	11	11	201	Et0/0	None
80F0C118	1A01984	Small	1	54	11	11	201	Et0/0	None
80F0C324	1A01AC4	Small	1	54	11	11	201	Et0/0	None
80F0C530	1A01C04	Small	1	54	11	11	201	Et0/0	None
80F0C73C	1A01D44	Small	1	54	11	11	201	Et0/0	None
80F5F644	1B9B0A4	Small	1	54	11	11	201	Et0/0	None
80FDF118	1B78604	Small	1	54	11	11	201	Et0/0	None
80FDF324	1B78744	Small	1	54	11	11	201	Et0/0	None
80FDF530	1B78884	Small	1	54	11	11	201	Et0/0	None
80FDF73C	1B789C4	Small	1	54	11	11	201	Et0/0	None
80FDF948	1B78B04	Small	1	54	11	11	201	Et0/0	None
80FDFB54	1B78C44	Small	1	54	11	11	201	Et0/0	None
80FDFD60	1B78D84	Small	1	54	11	11	201	Et0/0	None
80FDFE6C	1B78EC4	Small	1	54	11	11	201	Et0/0	None
80FE0178	1B79004	Small	1	54	11	11	201	Et0/0	None
80FE0384	1B79144	Small	1	54	11	11	201	Et0/0	None
80FE0590	1B79284	Small	1	54	11	11	201	Et0/0	None
80FE079C	1B793C4	Small	1	54	11	11	201	Et0/0	None
80FE09A8	1B79504	Small	1	54	11	11	201	Et0/0	None
80FE0BB4	1B79644	Small	1	54	11	11	201	Et0/0	None
80FE0DC0	1B79784	Small	1	54	11	11	201	Et0/0	None
80FE0FCC	1B798C4	Small	1	54	11	11	201	Et0/0	None
80FE11D8	1B79A04	Small	1	54	11	11	201	Et0/0	None
80FE13E4	1B79B44	Small	1	54	11	11	201	Et0/0	None
80FE15F0	1B79C84	Small	1	54	11	11	201	Et0/0	None
80FE17FC	1B79DC4	Small	1	54	11	11	201	Et0/0	None
80FE1A08	1B79F04	Small	1	54	11	11	201	Et0/0	None
80FE1C14	1B7A044	Small	1	54	11	11	201	Et0/0	None
80FE1E20	1B7A184	Small	1	54	11	11	201	Et0/0	None
80FE202C	1B7A2C4	Small	1	54	11	11	201	Et0/0	None
80FE2238	1B7A404	Small	1	54	11	11	201	Et0/0	None
81107F40	1B9B1E4	Small	1	54	11	11	201	Et0/0	None
8110814C	1B9B324	Small	1	54	11	11	201	Et0/0	None
81108358	1B9B464	Small	1	54	11	11	201	Et0/0	None
81108564	1B9B5A4	Small	1	54	11	11	201	Et0/0	None
8110897C	1B9B824	Small	1	54	11	11	201	Et0/0	None
81108B88	1B9B964	Small	1	54	11	11	201	Et0/0	None
81108D94	1B9BAA4	Small	1	54	11	11	201	Et0/0	None
81108FA0	1B9BBE4	Small	1	54	11	11	201	Et0/0	None
811093B8	1B9BE64	Small	1	54	11	11	201	Et0/0	None
811095C4	1B9BFA4	Small	1	54	11	11	201	Et0/0	None
811097D0	1B9C0E4	Small	1	54	11	11	201	Et0/0	None
811099DC	1B9C224	Small	1	54	11	11	201	Et0/0	None
81109DF4	1B9C4A4	Small	1	54	11	11	201	Et0/0	None
8110A000	1B9C5E4	Small	1	54	11	11	201	Et0/0	None
8110A20C	1B9C724	Small	1	54	11	11	201	Et0/0	None
8110A418	1B9C864	Small	1	54	11	11	201	Et0/0	None
81121364	1B9CC24	Small	1	54	11	11	201	Et0/0	None
81121570	1B9CD64	Small	1	54	11	11	201	Et0/0	None
81121988	1B9CFE4	Small	1	54	11	11	201	Et0/0	None
81121B94	1B9D124	Small	1	54	11	11	201	Et0/0	None
81121FAC	1B9D3A4	Small	1	54	11	11	201	Et0/0	None
811221B8	1B9D4E4	Small	1	54	11	11	201	Et0/0	None
811225D0	1B9D764	Small	1	54	11	11	201	Et0/0	None
811227DC	1B9D8A4	Small	1	54	11	11	201	Et0/0	None
811229E8	1B9D9E4	Small	1	54	11	11	201	Et0/0	None
81122BF4	1B9DB24	Small	1	54	11	11	201	Et0/0	None

Router#**show buffers old header**

Buffer information for Small buffer at 0x80F09828

data\_area 0x1A00084, refcount 1, next 0x0, flags 0x201  
linktype 11 (NOVELL), enctype 11 (NOVELL-ETHER), encsize 14, rxtype 7  
if\_input 0x80F57BE0 (Ethernet0/0), if\_output 0x0 (None)  
inputtime 0x4CDFC58, outputtime 0x0, oqnumber 65535  
datagramstart 0x1A000CA, datagramsize 54, maximum size 260  
mac\_start 0x1A000CA, addr\_start 0x1A000CA, info\_start 0x0  
network\_start 0x1A000D8, transport\_start 0x0

source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01

Buffer information for Small buffer at 0x80F09A34

data\_area 0x1A001C4, refcount 1, next 0x0, flags 0x201  
linktype 11 (NOVELL), enctype 11 (NOVELL-ETHER), encsize 14, rxtype 7  
if\_input 0x80F57BE0 (Ethernet0/0), if\_output 0x0 (None)  
inputtime 0x4CDFAA0, outputtime 0x0, oqnumber 65535  
datagramstart 0x1A0020A, datagramsize 54, maximum size 260  
mac\_start 0x1A0020A, addr\_start 0x1A0020A, info\_start 0x0  
network\_start 0x1A00218, transport\_start 0x0

source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01

Buffer information for Small buffer at 0x80F09C40

data\_area 0x1A00304, refcount 1, next 0x0, flags 0x201  
linktype 11 (NOVELL), enctype 11 (NOVELL-ETHER), encsize 14, rxtype 7  
if\_input 0x80F57BE0 (Ethernet0/0), if\_output 0x0 (None)  
inputtime 0x4CDF8D7, outputtime 0x0, oqnumber 65535  
datagramstart 0x1A0034A, datagramsize 54, maximum size 260  
mac\_start 0x1A0034A, addr\_start 0x1A0034A, info\_start 0x0  
network\_start 0x1A00358, transport\_start 0x0

source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01

....

Router#**show buffers input-interface ethernet 0/0**

Header	DataArea	Pool	Rcnt	Size	Link	Enc	Flags	Input	Output
80F09828	1A00084	Small	1	54	11	11	201	Et0/0	None
80F09A34	1A001C4	Small	1	54	11	11	201	Et0/0	None
80F09C40	1A00304	Small	1	54	11	11	201	Et0/0	None
80F09E4C	1A00444	Small	1	54	11	11	201	Et0/0	None
80F0A058	1A00584	Small	1	54	11	11	201	Et0/0	None
80F0A264	1A006C4	Small	1	54	11	11	201	Et0/0	None
80F0A470	1A00804	Small	1	54	11	11	201	Et0/0	None
80F0A67C	1A00944	Small	1	54	11	11	201	Et0/0	None
80F0A888	1A00A84	Small	1	54	11	11	201	Et0/0	None
80F0AA94	1A00BC4	Small	1	54	11	11	201	Et0/0	None
80F0ACA0	1A00D04	Small	1	54	11	11	201	Et0/0	None
80F0AEAC	1A00E44	Small	1	54	11	11	201	Et0/0	None
80F0B0B8	1A00F84	Small	1	54	11	11	201	Et0/0	None
80F0B2C4	1A010C4	Small	1	54	11	11	201	Et0/0	None
80F0B4D0	1A01204	Small	1	54	11	11	201	Et0/0	None
80F0B6DC	1A01344	Small	1	54	11	11	201	Et0/0	None
80F0B8E8	1A01484	Small	1	54	11	11	201	Et0/0	None
80F0BAF4	1A015C4	Small	1	54	11	11	201	Et0/0	None
80F0BD00	1A01704	Small	1	54	11	11	201	Et0/0	None

80F0BF0C	1A01844	Small	1	54	11	11	201	Et0/0	None
80F0C118	1A01984	Small	1	54	11	11	201	Et0/0	None
80F0C324	1A01AC4	Small	1	54	11	11	201	Et0/0	None
80F0C530	1A01C04	Small	1	54	11	11	201	Et0/0	None
80F0C73C	1A01D44	Small	1	54	11	11	201	Et0/0	None
80F5F644	1B9B0A4	Small	1	54	11	11	201	Et0/0	None
80FDF118	1B78604	Small	1	54	11	11	201	Et0/0	None
80FDF324	1B78744	Small	1	54	11	11	201	Et0/0	None
80FDF530	1B78884	Small	1	54	11	11	201	Et0/0	None
80FDF73C	1B789C4	Small	1	54	11	11	201	Et0/0	None
80FDF948	1B78B04	Small	1	54	11	11	201	Et0/0	None
80FDFB54	1B78C44	Small	1	54	11	11	201	Et0/0	None
80FDFD60	1B78D84	Small	1	54	11	11	201	Et0/0	None
80FDFDF6C	1B78EC4	Small	1	54	11	11	201	Et0/0	None
80FE0178	1B79004	Small	1	54	11	11	201	Et0/0	None
80FE0384	1B79144	Small	1	54	11	11	201	Et0/0	None
80FE0590	1B79284	Small	1	54	11	11	201	Et0/0	None
80FE079C	1B793C4	Small	1	54	11	11	201	Et0/0	None
80FE09A8	1B79504	Small	1	54	11	11	201	Et0/0	None
80FE0BB4	1B79644	Small	1	54	11	11	201	Et0/0	None
80FE0DC0	1B79784	Small	1	54	11	11	201	Et0/0	None
80FE0FCC	1B798C4	Small	1	54	11	11	201	Et0/0	None
80FE11D8	1B79A04	Small	1	54	11	11	201	Et0/0	None
80FE13E4	1B79B44	Small	1	54	11	11	201	Et0/0	None
80FE15F0	1B79C84	Small	1	54	11	11	201	Et0/0	None
80FE17FC	1B79DC4	Small	1	54	11	11	201	Et0/0	None
80FE1A08	1B79F04	Small	1	54	11	11	201	Et0/0	None
80FE1C14	1B7A044	Small	1	54	11	11	201	Et0/0	None
80FE1E20	1B7A184	Small	1	54	11	11	201	Et0/0	None
80FE202C	1B7A2C4	Small	1	54	11	11	201	Et0/0	None
80FE2238	1B7A404	Small	1	54	11	11	201	Et0/0	None
81107F40	1B9B1E4	Small	1	54	11	11	201	Et0/0	None
8110814C	1B9B324	Small	1	54	11	11	201	Et0/0	None
81108358	1B9B464	Small	1	54	11	11	201	Et0/0	None
81108564	1B9B5A4	Small	1	54	11	11	201	Et0/0	None
8110897C	1B9B824	Small	1	54	11	11	201	Et0/0	None
81108B88	1B9B964	Small	1	54	11	11	201	Et0/0	None
81108D94	1B9BAA4	Small	1	54	11	11	201	Et0/0	None
81108FA0	1B9BBE4	Small	1	54	11	11	201	Et0/0	None
811093B8	1B9BE64	Small	1	54	11	11	201	Et0/0	None
811095C4	1B9BFA4	Small	1	54	11	11	201	Et0/0	None
811097D0	1B9C0E4	Small	1	54	11	11	201	Et0/0	None
811099DC	1B9C224	Small	1	54	11	11	201	Et0/0	None
81109DF4	1B9C4A4	Small	1	54	11	11	201	Et0/0	None
8110A000	1B9C5E4	Small	1	54	11	11	201	Et0/0	None
8110A20C	1B9C724	Small	1	54	11	11	201	Et0/0	None
8110A418	1B9C864	Small	1	54	11	11	201	Et0/0	None
81121364	1B9CC24	Small	1	54	11	11	201	Et0/0	None
81121570	1B9CD64	Small	1	54	11	11	201	Et0/0	None
81121988	1B9CFE4	Small	1	54	11	11	201	Et0/0	None
81121B94	1B9D124	Small	1	54	11	11	201	Et0/0	None
81121FAC	1B9D3A4	Small	1	54	11	11	201	Et0/0	None
811221B8	1B9D4E4	Small	1	54	11	11	201	Et0/0	None
811225D0	1B9D764	Small	1	54	11	11	201	Et0/0	None
811227DC	1B9D8A4	Small	1	54	11	11	201	Et0/0	None
811229E8	1B9D9E4	Small	1	54	11	11	201	Et0/0	None
81122BF4	1B9DB24	Small	1	54	11	11	201	Et0/0	None

Router#show buffers address 81122BF4 dump

Buffer information for Small buffer at 0x81122BF4

```

data_area 0x1B9DB24, refcount 1, next 0x0, flags 0x201
linktype 11 (NOVELL), enctype 11 (NOVELL-ETHER), encsize 14, rxtype 7
if_input 0x80F57BE0 (Ethernet0/0), if_output 0x0 (None)

```



*!--- 153 out of 175 old buffers are IPX packets. Try to find out what  
!--- type of packets they are with another **grep** command:*

#### **grep socket buffers.log**

```
source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01  
source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01  
source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01  
source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01  
source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01  
source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01  
source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01  
source:BE200040.0060.09c3.f9fe socket 0453  
destination: BE200040.ffff.ffff.ffff socket 0453 protocol 01  
source:BE200040.0060.09c3.f9fe socket 0453
```

...

*!--- There are Broadcasts to socket 453, protocol 01...*

*!--- Those are IPX RIP packets.*

*!--- Disable IPX RIP, or use IPX EIGRP instead, until a bug fix is available.*

总之：

- 验证您是否有缓冲泄漏。缓冲泄漏经常被曲解作为突发数据流(与去进程交换由于一个不正确的配置或不支持的功能)的许多信息包，或者作为攻击。
- 缓冲泄漏是Cisco IOS软件Bug。此问题的佳解决方案是升级Cisco IOS软件到新版本。
- 如果这发生故障，请与Cisco TAC联系并且提供工程师相关**show buffer**和**show tech-support**命令的输出。

## Related Information

- [缓冲微调](#)
- [排除存储器问题故障](#)
- [Technical Support - Cisco Systems](#)