

# Retrieving Information from the Crashinfo File

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## Introduction

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## Introduction

This document explains what a crashinfo file is, what a crashinfo file contains, and how to retrieve information from the crashinfo file.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

The information in this document is based on these software and hardware versions:

- Cisco 1700, 3600, 7000, 7200, 7500, and 12000 Series Routers
- Cisco IOS® Software Release 11.1 and later

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

Refer to Cisco Technical Tips Conventions for more information on document conventions.

## Background

The crashinfo file is a collection of useful information related to the current crash stored in boot Flash or Flash memory.

When a router crashes due to data or stack corruption, more reload information is needed to debug this type of crash than just the output from the normal **show stacks** command. The reload information is written by default to **bootflash:crashinfo** on the Cisco 12000 Gigabit Router Processor (GRP), the Cisco 7000 and 7500

Route Switch Processor (RSP), and the Cisco 7200 Series Routers. For the Cisco 7500 Versatile Interface Processor 2 (VIP2), this file is stored by default to **bootflash:vip2\_slot\_no\_crashinfo** where the slot\_no is the VIP2 slot number. For the Cisco 7000 Route Processor (RP), the file is stored by default to **flash:crashinfo**.

Generation of the default crashinfo file was first introduced in the following Cisco IOS software releases:

- For RSPs and RPs:
  - ◆ 11.1(13)CA1
  - ◆ 11.1(19)CC
  - ◆ 11.2(10)P
  - ◆ 11.3(1)
  - ◆ 11.3(1)T
- For Cisco 7200s:
  - ◆ 11.1(18)CA
  - ◆ 11.2(15)P
  - ◆ 11.3(6)
  - ◆ 11.3(6)AA
  - ◆ 11.3(6)NA
  - ◆ 11.3(6)T
- For Cisco 12000 GRPs:
  - ◆ 11.2(11)GS2.1
  - ◆ 11.2(9)GS7.2
  - ◆ 11.2(14)GS2.5

The crashinfo collection mechanism is available in Cisco IOS Software Releases 12.0, 12.1, and 12.2 for these platforms:

- For Cisco 1700s:
  - ◆ 12.1(2)
  - ◆ 12.1(2)T
  - ◆ 12.2(1)
- For Cisco 2600s:
  - ◆ 12.1(13)
  - ◆ 12.2(7)T
  - ◆ 12.2(7)
- For Cisco 3600s:
  - ◆ 12.2.(12)DA
  - ◆ 12.2(11)T
  - ◆ 12.2(11)

## Contents of the Crashinfo File

The crashinfo file contains this information:

- limited error message (log) and command history
- description of the image running at the time of the crash

- **show alignment**
- malloc and free traces
- process level stack trace
- process level context
- process level stack dump
- interrupt level stack dump
- process level info
- process level register memory dump

## Retrieving Information from the Crashinfo File

When a crashinfo is available in boot Flash, this appears at the end of the **show stack** command output:

```
*****
***** Information of Last System Crash *****
*****

Using bootflash:crashinfo_20000323-061850. 2000
CMD: 'sh int fas' 03:23:41 UTC Thu Mar 2 2000
CMD: 'sh int fastEthernet 6/0/0' 03:23:44 UTC Thu Mar 2 2000
CMD: 'conf t' 03:23:56 UTC Thu Mar 2 2000
CMD: 'no ip cef di' 03:23:58 UTC Thu Mar 2 2000
CMD: 'no ip cef distributed ' 03:23:58 UTC Thu Mar 2 2000
...
```

Issue these commands in order to retrieve a crashinfo file:

```
Router#dir bootflash:
Directory of bootflash:/

 1  -rw-      4088008   Oct 07 1999 04:51:29  rsp-boot-mz.120-6.6
 2  -rw-      178619    Mar 23 2000 06:18:50  crashinfo_20000323-061850

7602176 bytes total (3335292 bytes free)
Router#
Router#more bootflash:crashinfo_20000323-061850
2000
CMD: 'sh int fas' 03:23:41 UTC Thu Mar 2 2000
CMD: 'sh int fastEthernet 6/0/0' 03:23:44 UTC Thu Mar 2 2000
CMD: 'conf t' 03:23:56 UTC Thu Mar 2 2000
CMD: 'no ip cef DI 03:23:58 UTC Thu Mar 2 2000
CMD: 'no ip cef distributed ' 03:23:58 UTC Thu Mar 2 2000
CMD: 'ip cef' 03:24:01 UTC Thu Mar 2 2000
...
```

## Copying the Crashinfo File to a TFTP Server

Issue these commands in order to copy the crashinfo file to a Trivial File Transfer Protocol (TFTP) server:

```
Router#dir bootflash:
 1  -rw-      4088008   Oct 07 1999 04:51:29  rsp-boot-mz.120-6.6
 2  -rw-      178619    Mar 23 2000 06:18:50  crashinfo_20000323-061850

Router#copy bootflash:crashinfo_20000323-061850 tftp
Address or name of remote host []? 10.1.1.1
Destination filename [crashinfo_20000323-061850 ]?
!!
```

If the slave RSP has crashed, look in the **slavebootflash:**. For the Cisco 12000 GSR, look in the **sec-bootflash:**. Ensure there is enough free space in boot Flash by using the **dir bootflash:** command. In

order to delete an old crashinfo file to make free space, issue the **delete bootflash:filename** command. The **delete bootflash:filename** command marks the file as deleted, but the file is still physically in memory and can be restored. In order to physically delete it from memory, issue the **squeeze bootflash:** command.

If the router has crashed multiple times, the crashinfo files can stack up with only the last one viewable. For example:

```
Router#dir /all bootflash:
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time----- name
1  .. unknown  FD38E5C7  3FD81C   25  3921820 Oct 02 1998 14:43:56
  rsp-boot-mz.112-15a.P.bin
2  .D config   AF12EF9F  41C308    9   125547 Oct 16 1998 11:10:10 crashinfo
3  .. config   33DEAF65  43A950    9   124360 Oct 16 1998 11:15:50 crashinfo

3430064 bytes available (4172112 bytes used)
```

Note that one file is deleted and one is viewable.

```
Router#show file bootflash:crashinfo

Compliance with U.S. Export Laws and Regulations - Encryption

This product performs encryption and is regulated for export
by the US Government.

..... file continues here.....
```

```
Router#dir /all bootflash:
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time----- name
1  .. unknown  FD38E5C7  3FD81C   25  3921820 Oct 02 1998 14:43:56
  rsp-boot-mz.112-15a.P.bin
2  .D config   AF12EF9F  41C308    9   125547 Oct 16 1998 11:10:10 crashinfo
3  .. config   33DEAF65  43A950    9   124360 Oct 16 1998 11:15:50 crashinfo

3430064 bytes available (4172112 bytes used)
```

Delete the file you just looked at:

```
Router#delete bootflash:crashinfo

Router#dir /all bootflash:
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time----- name
1  .. unknown  FD38E5C7  3FD81C   25  3921820 Oct 02 1998 14:43:56
  rsp-boot-mz.112-15a.P.bin
2  .D config   AF12EF9F  41C308    9   125547 Oct 16 1998 11:10:10 crashinfo
3  .D config   33DEAF65  43A950    9   124360 Oct 16 1998 11:15:50 crashinfo

3430064 bytes available (4172112 bytes used)
```

Restore the old file:

```
Router#undelete ?
<0-700000> File index

Router#undelete 2
File undelete error (file not found)
Router#undelete 2 ?
WORD Device name

Router#undelete 2 bootflash:
Router#dir /all bootflash:
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time----- name
```

```

1  .. unknown  FD38E5C7  3FD81C   25  3921820 Oct 02 1998 14:43:56
rsp-boot-mz.112-15a.P.bin
2  .. config   AF12EF9F  41C308    9   125547 Oct 16 1998 11:10:10 crashinfo
3  .D config   33DEAF65  43A950    9   124360 Oct 16 1998 11:15:50 crashinfo

```

3430064 bytes available (4172112 bytes used)

Examine the old file with the **show file bootflash:crashinfo** command. Repeat this procedure to review older crashes.

## Example Crashinfo File

This is an example of a crashinfo file:

```
=== Flushing messages (07:12:39 UTC Tue Jul 18 2000) ===
```

Buffered messages:

```

00:00:35: %RSP-3-NOSTART: No microcode for Unknown card, slot 4
00:00:43: %SYS-4-CONFIG_NEWER: Configuration from version 12.1 may not be correctly
understood
00:00:44: %SYS-5-CONFIG_I: Configured from memory by console
00:00:44: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1, changed state
to down
00:00:44: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/2, changed state
to down
00:00:44: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/3, changed state
to down
00:00:44: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/4, changed state
to down
00:00:44: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/5, changed state
to down
00:00:44: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/0, changed state
to down
00:00:44: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state
to down
00:00:48: %SYS-5-RESTART: System restarted --
Cisco Internetwork Operating System Software
IOS (tm) RSP Software (RSP-PV-M), Version 12.0(10.6)ST, EARLY DEPLOYMENT MAINTENANCE
INTERIM SOFTWARE
Copyright (c) 1986-2000 by cisco Systems, Inc.
Compiled Fri 23-Jun-00 16:02 by richv
00:00:53: %LINK-5-CHANGED: Interface Ethernet0/2, changed state to administratively down
00:00:53: %LINK-5-CHANGED: Interface Ethernet0/3, changed state to administratively down
00:00:53: %LINK-5-CHANGED: Interface Ethernet0/4, changed state to administratively down
00:00:53: %LINK-5-CHANGED: Interface Ethernet0/5, changed state to administratively down
00:00:53: %LINK-5-CHANGED: Interface FastEthernet9/1/0, changed state to administratively
down
00:00:53: %LINK-3-UPDOWN: Interface Ethernet0/0, changed state to up
00:00:53: %LINK-3-UPDOWN: Interface Ethernet0/1, changed state to up
00:00:53: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to up
00:00:54: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/1/0, changed
state to down
00:00:54: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, changed state
to up
00:00:54: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1, changed state
to up
00:01:01: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to up
00:10:36: %LINK-3-UPDOWN: Interface FastEthernet9/1/0, changed state to up
00:10:37: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/1/0, changed
state to up
00:12:26: %SYS-5-CONFIG_I: Configured from console by console
00:36:42: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to down
00:36:43: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to down

```

00:37:40: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to up  
00:37:49: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to up  
00:38:19: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to down  
00:38:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to down  
00:39:27: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to up  
00:39:36: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to up  
14:20:06: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/1/0, changed state to down  
14:21:09: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/1/0, changed state to up  
14:22:54: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/1/0, changed state to down  
14:26:39: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/1/0, changed state to up  
16:00:16: %CLEAR-5-COUNTERS: Clear counter on all interfaces by console  
16:10:09: %SYS-5-CONFIG\_I: Configured from console by console  
16:10:28: %SYS-5-CONFIG\_I: Configured from console by console  
16:10:58: %LINK-5-CHANGED: Interface Hssi9/0/1, changed state to administratively down  
16:10:59: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to down  
16:11:03: %SYS-5-CONFIG\_I: Configured from console by console  
16:11:03: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to up  
16:11:15: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to up  
16:12:56: %RSP-3-NOSTART: No microcode for Unknown card, slot 4  
16:13:03: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to down  
16:13:16: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to up  
16:14:01: %SYS-5-CONFIG\_I: Configured from console by console  
16:14:13: %CLEAR-5-COUNTERS: Clear counter on all interfaces by console  
18:00:11: %SYS-5-CONFIG\_I: Configured from console by vty0 (144.254.2.77)  
18:00:29: %SYS-5-CONFIG\_I: Configured from console by vty0 (144.254.2.77)  
19:36:09: %SYS-5-CONFIG\_I: Configured from console by vty0 (144.254.2.77)  
21:06:20: %SYS-5-CONFIG\_I: Configured from console by console  
21:10:28: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to down  
21:10:29: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to down  
21:11:30: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to up  
21:11:31: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to up  
21:12:01: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to down  
21:12:09: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to down  
21:13:22: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to up  
21:13:38: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to up  
21:14:08: %LINEPROTO-5-UPDOWN: Line protocol on Interface Hssi9/0/1, changed state to down  
21:37:24: %LINK-3-UPDOWN: Interface Hssi9/0/1, changed state to down  
21:45:03: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/1/0, changed state to down  
Queued messages:  
22:13:19: %SYS-3-LOGGER\_FLUSHING: System pausing to ensure console debugging output.  
  
22:13:19: %SYS-3-LOGGER\_FLUSHED: System was paused for 00:00:00 to ensure console debugging output.  
=== Start of Crashinfo Collection (07:12:39 UTC Tue Jul 18 2000) ===

For image:

Cisco Internetwork Operating System Software  
IOS (tm) RSP Software (RSP-PV-M), Version 12.0(10.6)ST, EARLY DEPLOYMENT MAINTENANCE INTERIM SOFTWARE  
Copyright (c) 1986-2000 by cisco Systems, Inc.  
Compiled Fri 23-Jun-00 16:02 by richv  
===== Show Alignment =====

No alignment data has been recorded.

No spurious memory references have been recorded.

===== Malloc and Free Traces =====

MallocFree Trace: ixmallocfree=0x30 ptr=0x6121E5D0 6121E450: 619510A4 6026ED7C  
61955EC0 6026ED7C 6196FDD8 6026ED7C 6197FDD4 6026ED7C 6121E470: 619A0D1C 6026ED7C  
619B0DE8 6026ED7C 619D6A18 6026ED7C 619E6A14 6026ED7C 6121E490: 619F6A10 6026ED7C  
61A06A0C 6026ED7C 61A16A08 6026ED7C 61A26A04 6026ED7C 6121E4B0: 61A39B20 6026ED7C  
61A3D46C 6026ED7C 61A52900 6026ED7C 61A68B74 6026ED7C 6121E4D0: 61A5B358 6026ED7C

61AD9600 6026ED7C 61AD9E40 6026ED7C 61AE9E3C 6026ED7C 6121E4F0: 61AF9E38 6026ED7C  
61B09E34 6026ED7C 61B211A0 6026ED7C 61A8E6BC 6026ED7C 6121E510: 61AA201C 6026ED7C  
61B209E8 6044EEA8 61B20A40 6044EEA8 61B20A98 6044EEA8 6121E530: 61B20AF0 6044EEA8  
61B20B48 6044EEA8 61B20BA0 6044EEA8 61AB5450 603FBE50 6121E550: 61AB5450 603FBE50  
61AB25F8 60212C2C 61AB265C 60000164 61A7EC5C 30000020 6121E570: 61A7EC5C 602120DC  
61A8839C 3000001E 61A8839C 60474D38 6150FBB4 60474FC4 6121E590: 612AF924 60284B40  
61B46488 6023E360 61B4ABB8 6325AA24 61A3CCD8 6023E378 6121E5B0: 6150FB68 60212C2C  
6150FBB4 60000016 612B29B4 3000001E 612B29B4 602120DC 6121E5D0: 613CA880 601FC4F8  
616F8DA0 6026ED7C 61708D9C 6026ED7C 61718D98 6026ED7C 6121E5F0: 61728D94 6026ED7C  
617440C4 6026ED7C 61744308 6026ED7C 61759038 6026ED7C 6121E610: 61770034 6026ED7C  
6178AD60 6026ED7C 6179AD5C 6026ED7C 617AAD58 6026ED7C 6121E630: 617BAD54 6026ED7C  
61912A5C 6026ED7C 6192C004 6026ED7C 61940974 6026ED7C

=====  
Stack Trace =====

-Traceback= 60287EE8 602B8D5C 6021CAF4 6022834C 6026BC4C 6026BC38

=====  
Context =====

RSP Software (RSP-PV-M), Version 12.0(10.6)ST, EARLY DEPLOYMENT MAINTENANCE INTERIM SOFTWARE

Compiled Fri 23-Jun-00 16:02 by richv

Signal = 23, Code = 0x24, Uptime 22:13:19

\$0 : 00000000, AT : 61220000, v0 : 00000032, v1 : 61222AF0

a0 : 60227BDC, a1 : 6129B958, a2 : 61AD82F8, a3 : 00000000

t0 : 61A3BA34, t1 : 8000FDA0, t2 : 34008700, t3 : FFFF00FF

t4 : 00000083, t5 : 3E840024, t6 : 00000000, t7 : 00000000

s0 : 0000003C, s1 : 00000036, s2 : 00000000, s3 : 61B33FF8

s4 : 00000000, s5 : 6121E840, s6 : 61209A30, s7 : 00000000

t8 : 602895EC, t9 : 00000000, k0 : 616DD144, k1 : 60290920

gp : 610AEDC0, sp : 61B33FE0, s8 : 6120FB00, ra : 602B8D5C

EPC : 60287EE8, SREG : 3400E703, Cause : 00000024

Error EPC : EFF5BFE7, BadVaddr : 403208D9

=====  
Stack Dump =====

Stack Frame Pointer in Context is 0x61B33FE0, at process level

61B33BE0:	3	0	8	1	602086F0	60209F0C	0	1
61B33C00:	7FFFFFFD	2	0	3	61B312F0	60209F0C	616E48B4	60208E1C
61B33C20:	616E48B4	FFFFFFFF	61B33BDF	20000	614CA664	0	0	1
61B33C40:	7FFFFFFA	5	0	5	61537304	60209F0C	0	1
61B33C60:	7FFFFFFA	5	0	5	61537304	60209F0C	0	F
61B33C80:	A	60209A78	61B312F2	1	30B33CD8	0	7FFFFFFF	1
61B33CA0:	0	9	6038DD10	EF	1	F3	0	C
61B33CC0:	61B33CC0	9	61153CC8	61B33FE8	61B34054	FFFFFFFF8	0	0
61B33CE0:	6129B958	0	601EE388	6129B958	20220	65	60283F98	20
61B33D00:	4A	60208E1C	6129B958	602B66C4	601EE1D0	4	6129B958	0
61B33D20:	601EE1D8	601EE1C8	603981A4	60208E1C	FFFFFFFF	1	3C	6129B958
61B33D40:	0	61B33FF8	A	1	602086F0	6129C2CC	36	1
61B33D60:	602086F0	B0B0B0B0	B0B0B0B0	B0B0B0B0	B0B0B0B0	B0B0B0B0	0	B0B0B0B0
61B33D80:	0	6129C3CD	7FFFFFFE	0	0	1	60E10000	60209BB8
61B33DA0:	0	7FFFFFFF	7FFFFFFE3	1C	0	1C	61B33FA8	60209F0C
61B33DC0:	6129C1BC	6129B958	61B33FD0	61B33FF8	A	1	602086F0	6038DB78
61B33DE0:	61B34120	6129B958	602087AC	2D	A	1	602086F0	1
61B33E00:	616DBEB0	98967D	0	0	0	4	602086F0	FFFFFFFF30
61B33E20:	616DBE8C	0	602204DC	0	61B33FC4	60E0F5DA	7D0	0
61B33E40:	4	610A7CD6	60E0F5D8	61B33EE0	0	60208ABC	61B33FC4	1
61B33E60:	60E0F601	61B33E88	0	1	3C	36	0	61B33FF8
61B33E80:	0	23	61209A30	60208E1C	612B2990	0	602120DC	0
61B33EA0:	0	0	6129C668	61B33EF0	0	602120DC	61116268	2
61B33EC0:	FFFFFFFFD	D	10000000	60272480	1	100	60212C2C	6129C41C
61B33EE0:	0	6129C3CD	602120DC	61B33FF8	64	A	6129C668	6129C3CD
61B33F00:	61B33FD0	61B33FF8	610A7E80	A	FFFFFFFFD	602120E4	61B33FD0	61B33FF8
61B33F20:	610A7E80	A	6129C1BC	6129C3CD	602106E0	602103FC	61209A30	0
61B33F40:	6120FB00	60208A04	61B33FC8	1	0	4C4B0E4	0	0
61B33F60:	61A3BB9C	36	0	61B33FF8	0	6121E840	61209A30	0
61B33F80:	6027A0F8	36	60213150	61B33FC8	FFFFFFFFD	FFFFFFFFF	6027A1EC	6027A1E0
61B33FA0:	4A	61B33FF8	64	36	0	4C4B0E4	64	6027E2F8
61B33FC0:	3C	60208CCC	60E4C2C8	61B33FE4	602B8D4C	FFFFFFFFF	3C	602B8D54

```

61B33FE0: 60E4C2A4 FFFFFFFD          0 FFFFFFFE          5 60E3B024 36008935 61537A18
61B34000: 602677B4 61B3408C 60260394 400000          0          0          0 FFFFFFFF
61B34020: 60E23C4C 61B34020          0          0          0 FFFFFFFF 61B340B0 61537A20
61B34040:          0          0          0          0 FFFFFFFD          1 61537A18          0
61B34060:          0          0          0          0          0 60208980          0 601F2698
61B34080: 60E163C6 61B340B0          0 FFFFFFFF 61537A18 61537A18 6021C068 6021C040
61B340A0:          0 60E163B8 6153892B 61B340B0 30373A31 313A3534 20555443 20547565
61B340C0: 204A756C 20313820 32303030 FFFFFFFF          0          0 24000000 61537A18
61B340E0: 60E23C78 60E23C4C 6021B744 FFFFFFFF 61537A18 614D2EE4          5          0
61B34100: 6021B74C 6021B63C          1 6129BAE8          0 61537A18          0          1
61B34120:          0 6121E840 61209A30          0          0 6021CAF4 61B34140          0
61B34140:          4A          1          0          0          0          5          0 6129B958
61B34160: 61537A18          0          0          1          0 6129BAE8 61209A30 6022834C
61B34180: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF          1 610A8124 6153890C FFFFFFFF
61B341A0:          1 DFFFFFFF FFFFFFFF 6129C3CD          0          0          0          0
61B341C0:          0          0          0          0          0 6026BC4C FFFFFFFF FFFFFFFF
61B341E0: FFFFFFFF FFFFFFFF 6026BC38 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
61B34200: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FD0110DF AB1234CD          19
61B34220: 614F3BF8 60E34110 6023E098 61B38948 61B31320 80002384          1 6023E360
61B34240: AFACEFAD          0          0          0          0          0          0          0
61B34260:          0          0          0          0          0          0          0          0
61B34280:          0          0          0          0          0          0          0          0
61B342A0:          0          0          0          0          0          0          0          0
61B342C0:          0          0          0          0          0          0          0          0
61B342E0:          0          0          0          0          0          0          0          0
61B34300:          0          0          0          0          0          0          0          0
61B34320:          0          0          0          0          0          0          0          0
61B34340:          0          0          0          0          0          0          0          0
61B34360:          0          0          0          0          0          0          0          0
61B34380:          0          0          0          0          0          0          0          0
61B343A0:          0          0          0          0          0          0          0          0
61B343C0:          0          0          0          0          0          0          0          0

```

==== Process Level Info =====

---- Current Process Block (at 0x61A3BA34) ----

```

61A3BA0C: AB1234CD          4A 61A3BA34 60E432B4 60290684 61A3BC50 61A3B88C 8000010E
61A3BA2C:          1 606FB390 61B31334 8000FDA0 60227BDC 6129B958          64          36
61A3BA4C:          0 61B33FF8          0 6121E840 61209A30          0 6120FB00 61B341F0
61A3BA6C:          0 6027E32C          0          0          0          0 10100          1
61A3BA8C:          0          0          0          4A          0          0 10492E8 1040BB8
61A3BAAC:          0          0          0 ED58          0 6129B958 F084C          0
61A3BACC:          0 4C4B0E4          0 4C4B0E4 435CC9 AAOEE 60E0EEE4          3
61A3BAEC:          0          0          73          52          2EE0          2EE0 6129B958          0
61A3BB0C:          0          0          0          0          0          0          0 61B1A00C
61A3BB2C: 61A3BA34 6121E800          0          0 61222C80          0          0          0
61A3BB4C:          4230          0          0          0 61A3BB34          0          0          0
61A3BB6C:          4280 61A3BA34          0          0          0 61A3BB34 61A3BA34
61A3BB8C:          0          0 142D0          0          0 61A3BB34 61A3BA34
61A3BBAC:          0          0 242F0          0          0          0          0          0
61A3BBCC:          0 61754D5C          0          0          0          0          0          0
61A3BBEC:          0          0          0 61754DB8 61A3BBE4 61754D64          0 61223950
61A3BC0C:          0          0          0 FFFFFFFF FFFFFFFF          0          0          0
61A3BC2C:          0          0          0          0          0 61AA1F10          0 BEEFCAFE

```

---- Partial decode of process block ----

Pid 74: Process "Exec" stack 0x61B31334 savedsp 0x8000FDA0

Flags: analyze crashblock on\_old\_queue

Regs s0-s8,ra at last suspend; a0,a1,sp from proc creation, PC unused:

```

a0: 60227BDC a1: 6129B958 s0: 00000064 s1: 00000036 s2: 00000000
s3: 61B33FF8 s4: 00000000 s5: 6121E840 s6: 61209A30 s7: 00000000
s8: 6120FB00 sp: 61B341F0 PC: 00000000 ra: 6027E32C

```

```

Status      0x00000000 Orig_ra  0x00000000 Routine   0x00000000 Signal  0
Caller_pc   0x00000000 Callee_pc 0x00000000 Dbg_events 0x00000000 State   0
Totmalloc   17076968 Totfree   17042360 Totgetbuf  0

```

```

Totretbuf  0          Edisms    0x0          Eparm      0x6129B958
Elapsed    0xF084C     Ncalls    0x435CC9   Ngiveups   0xAA0EE
Priority_q  3          Ticks_5s  0          Cpu_5sec   0          Cpu_lmin  115
Cpu_5min   82          Stacksize 0x2EE0     Lowstack   0x2EE0
Ttyptr     0x6129B958 Mem_holding 0x0        Thrash_count 0
Wakeup_reasons 0x0FFFFFFF Default_wakeup_reasons 0x0FFFFFFF
Direct_wakeup_major 0x00000000 Direct_wakeup_minor 0x00000000

```

---- Current Process Stack (0xB44 bytes used, out of 0x2EE0 available) ----

Current SP = 0x61B33FE0, saved SP = 0x8000FDA0

```

61B33E14:      4 602086F0 FFFFFFFF30 616DBE8C      0 602204DC      0 61B33FC4
61B33E34: 60E0F5DA      7D0      0      4 610A7CD6 60E0F5D8 61B33EE0      0
61B33E54: 60208ABC 61B33FC4      1 60E0F601 61B33E88      0      1      3C
61B33E74:      36      0 61B33FF8      0      23 61209A30 60208E1C 612B2990
61B33E94:      0 602120DC      0      0      0 6129C668 61B33EF0      0
61B33EB4: 602120DC 61116268      2 FFFFFFFFD      D 10000000 60272480      1
61B33ED4:     100 60212C2C 6129C41C      0 6129C3CD 602120DC 61B33FF8      64
61B33EF4:      A 6129C668 6129C3CD 61B33FD0 61B33FF8 610A7E80      A FFFFFFFFD
61B33F14: 602120E4 61B33FD0 61B33FF8 610A7E80      A 6129C1BC 6129C3CD 602106E0
61B33F34: 602103FC 61209A30      0 6120FB00 60208A04 61B33FC8      1      0
61B33F54:  4C4B0E4      0      0 61A3BB9C      36      0 61B33FF8      0
61B33F74: 6121E840 61209A30      0 6027A0F8      36 60213150 61B33FC8 FFFFFFFFD
61B33F94: FFFFFFFF 6027A1EC 6027A1E0      4A 61B33FF8      64      36      0
61B33FB4:  4C4B0E4      64 6027E2F8      3C 60208CCC 60E4C2C8 61B33FE4 602B8D4C
61B33FD4: FFFFFFFF      3C 602B8D54 60E4C2A4 FFFFFFFFD      0 FFFFFFFFE      5
61B33FF4: 60E3B024 36008935 61537A18 602677B4 61B3408C 60260394      400000      0
61B34014:      0      0 FFFFFFFF 60E23C4C 61B34020      0      0      0
61B34034: FFFFFFFF 61B340B0 61537A20      0      0      0      0 FFFFFFFFD
61B34054:      1 61537A18      0      0      0      0      0      0
61B34074: 60208980      0 601F2698 60E163C6 61B340B0      0 FFFFFFFF 61537A18
61B34094: 61537A18 6021C068 6021C040      0 60E163B8 6153892B 61B340B0 30373A31
61B340B4: 313A3534 20555443 20547565 204A756C 20313820 32303030      FFFFFFFF      0
61B340D4:      0 2400000 61537A18 60E23C78 60E23C4C 6021B744 FFFFFFFF 61537A18
61B340F4: 614D2EE4      5      0 6021B74C 6021B63C      1 6129BAE8      0
61B34114: 61537A18      0      1      0 6121E840 61209A30      0      0
61B34134: 6021CAF4 61B34140      0      4A      1      0      0      0
61B34154:      5      0 6129B958 61537A18      0      0      1      0
61B34174: 6129BAE8 61209A30 6022834C FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF      1
61B34194: 610A8124 6153890C FFFFFFFF      1 DFFFFFFF FFFFFFFF 6129C3CD      0
61B341B4:      0      0      0      0      0      0      0      0
61B341D4: 6026BC4C FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF 6026BC38 FFFFFFFF FFFFFFFF
61B341F4: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF

```

```

===== Interrupt Level Stack Dump =====
WARNING: Interrupt stack dumps are consistent ONLY for interrupts which
are blocked during exception handling. Also register output is valid
ONLY for interrupts which store an r4k_context block on the stack.

```

---- Level 1 Interrupt stack (0x3BC bytes used, out of 0x2328 available) ----

```

intstacks[1]: base 0x61502F44 stack 0x61505268 routine 0x602CB5A4 count 0x15B17FD
                size 0x2328      low 0x2328      desc 0x60E49E58

61504EB0:      0 6019F318 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF      FFFFFFFF FFFFFFFF
61504ED0: 6129B958 612581A0 612581A0 48009CE0 AC82817 4061E5E8      0 61207AB0
61504EF0: 612581A0 601BADFC 61758CA4 61758B5C      0 6125F280      0 4ADB38C
61504F10:      0 4ADB388 61222C80      1      8 60E40000      5A      5A
61504F30: 61A3BB24      0 61758CA4 61758B5C      0 612581A0 6027A968 6027F4C0
61504F50: 6176B108 6176AFC0      0 612581A0 6027A968 61758B5C 6023E628 6027EEE0
61504F70:      8 6176AFC0      8 6176AFC0      8 6027EEE0      8 614F0630
61504F90:      8 614F0630      8 6027EEE0      1 6027F4C0 61812740 612581A0
61504FB0: 614F40AC 614BEE54      1 6027F4C0 615076E0 6027FB80 614BEE54 612581A0
61504FD0: 614BEE54 612581A0 615076E0 6027FB80      3C      3C 602BF0C4      0
61504FF0: 61869450 6024DE78 615076E0 602BF0C4 61869450 612581A0 6024DE44      0

```

```

61505010: 615076E0 612581A0      EE 61869450 615076E0 612581A0      EE 602BF360
61505030:      200 6111E828 61A3BB24      0      7 612581A0 405BBA5A      7
61505050:      200 6111E828 602C15B0 602C136C 615076E0      7 405BBA68      E0
61505070: 61A8C144 612581A0 612581A0 4800AC10 585BBA5A 602CE360 FFFFFFFF FFFFFFFF
61505090: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
615050B0: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
615050D0:      0 2AB60919      FFFFFFFF      0      60 1000C00      0 FFFFFFFF
615050F0: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF 61A8C144 61222CB0
61505110: 8000FE30      0      1      0 61B1A00C      0 61220000 6028BEE8
61505130: FFFFFFFF FFFFFFFF      0 61220000      0      1      0 61A8C234
61505150:      0      0      0 4C4A138      0      0      0      0
61505170:      0 61222FA0      0 61AA07A8      0      1 FFFFFFFF FFFF00FF
61505190:      0      83      0 3E840024      0      400      0      0
615051B0: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
615051D0: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
615051F0:      0 602895EC      0      0      0 616DD144      0 60290920
61505210: FFFFFFFF FFFFFFFF FFFFFFFF 8000FE20 FFFFFFFF FFFFFFFF      0 60294680
61505230: 3400E703 FFFFFFFF FFFFFFFF 932D9556 FFFFFFFF FD40711A FFFFFFFF FFFFFFFF
61505250: FFFFFFFF FFFFFFFF      0 60292830 FFFFFFFF FFFFFFFF FFFFFFFF
$0 : FFFFFFFF, AT : 61220000, v0 : 00000001, v1 : 61A8C234
a0 : 00000000, a1 : 04C4A138, a2 : 00000000, a3 : 00000000
t0 : 61222FA0, t1 : 61AA07A8, t2 : 00000001, t3 : FFFF00FF
t4 : 00000083, t5 : 3E840024, t6 : 00000400, t7 : 00000000
s0 : FFFFFFFF, s1 : FFFFFFFF, s2 : FFFFFFFF, s3 : FFFFFFFF
s4 : FFFFFFFF, s5 : FFFFFFFF, s6 : FFFFFFFF, s7 : FFFFFFFF
t8 : 602895EC, t9 : 00000000, k0 : 616DD144, k1 : 60290920
gp : FFFFFFFF, sp : 8000FE20, s8 : FFFFFFFF, ra : 60294680
EPC : 60292830, ErrorEPC : FFFFFFFF, SREG : 3400E703

```

---- Level 2 Interrupt stack (0x3C8 bytes used, out of 0x2328 available) ----

```

...
...
...

```

---- Level 7 Interrupt stack (0x190 bytes used, out of 0x2328 available) ----

```

intstacks[7]: base 0x61297120 stack 0x61299440 routine 0x6028B3D8 count 0x1313314
              size 0x2328      low 0x2328      desc 0x60E40D18

```

```

612992B8:      0      AF5C      0 4C4B0E4 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
612992D8: 61A4F0CC      1680 61220000 6028B4E8 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
612992F8: 6028A2BC      38 6028B2DC FFFFFFFF FFFFFFFF FFFFFFFF      0      24
61299318:      0      121A3      0      3      0 7CDEBEBE      0      3E8
61299338:      0      3E8      0      8      0 F4240      0 34008001
61299358:      0 34008000 FFFFFFFF FFFF00FF      0 6107EEF0      0      FF
61299378:      0 6107EC98      0 8B4CEA FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
61299398: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
612993B8: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF      0 39AF      0      0
612993D8:      0 61221940      0      0 FFFFFFFF FFFFFFFF      0 6107EA20
612993F8: FFFFFFFF FFFFFFFF      0 6028B170 34008003 FFFFFFFF      0 1E848
61299418:      0      0 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF      0 6028B2DC
61299438: FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF

```

```

$0 : FFFFFFFF, AT : 00000024, v0 : 00000000, v1 : 80808080
a0 : 00004DC0, a1 : 0053348C, a2 : 6107EA40, a3 : 00000004
t0 : 29292929, t1 : 34008001, t2 : 34008000, t3 : FFFF00FF
t4 : 6107EEF0, t5 : 000000FF, t6 : 6107EC98, t7 : 008B4CEA
s0 : FFFFFFFF, s1 : FFFFFFFF, s2 : FFFFFFFF, s3 : FFFFFFFF
s4 : FFFFFFFF, s5 : FFFFFFFF, s6 : FFFFFFFF, s7 : FFFFFFFF
t8 : 000039AF, t9 : 00000000, k0 : 61221940, k1 : 00000000
gp : FFFFFFFF, sp : 6107EA30, s8 : FFFFFFFF, ra : 60395FBC
EPC : 60395FB4, ErrorEPC : FFFFFFFF, SREG : 34008003

```

===== Register Memory Dump =====

```

Reg00($0):      0 [Not RAM Addr]
Reg01(AT): 61220000

```

```

Reg02(v0):      32 [Not RAM Addr]
Reg03(v1): 61222AF0
Reg04(a0): 60227BDC
Reg05(a1): 6129B958 [In malloc Block 0x6129B930] [Last malloc Block 0x6129B850]
Reg06(a2): 61AD82F8 [In malloc Block 0x61AD82D0]
Reg07(a3):      0 [Not RAM Addr]
Reg08(t0): 61A3BA34 [In malloc Block 0x61A3BA0C] [Last malloc Block 0x61A3B878]
Reg09(t1): 8000FDA0
Reg10(t2): 34008700 [Not RAM Addr]
Reg11(t3): FFFF00FF [Not RAM Addr]
Reg12(t4):      83 [Not RAM Addr]
Reg13(t5): 3E840024 [Not RAM Addr]
Reg14(t6):      0 [Not RAM Addr]
Reg15(t7):      0 [Not RAM Addr]
Reg16(s0):      3C [Not RAM Addr]
Reg17(s1):      36 [Not RAM Addr]
Reg18(s2):      0 [Not RAM Addr]
Reg19(s3): 61B33FF8
Reg20(s4):      0 [Not RAM Addr]
Reg21(s5): 6121E840
Reg22(s6): 61209A30
Reg23(s7):      0 [Not RAM Addr]
Reg24(t8): 602895EC
Reg25(t9):      0 [Not RAM Addr]
Reg26(k0): 616DD144 [In malloc Block 0x616DD0FC] [Last malloc Block 0x616DCFD0]
Reg27(k1): 60290920
Reg28(gp): 610AEDC0
Reg29(sp): 61B33FE0
Reg30(s8): 6120FB00
Reg31(ra): 602B8D5C

```

```
---- block0 ptr=61220000 is_malloc=0 ----
```

```

6121FFC0:      0      0      0      0      0      0      0      0      0
6121FFE0:      0      0      0      0      0      0      0      0      0
61220000:      0      0      0      0      0      0      0      0      0
61220020:      0      0      0      0      0      0      0      0      0
61220040:      0      0      0      0      0      0      0      0      0
61220060:      0      0      0      0      0      0      0      0      0
61220080:      0      0 602833AC      0      0 602833AC      0      0
612200A0: 602833AC      0      0 602833AC      0      0 602833AC      0
612200C0:      0 602833AC      0      0 602833AC      68      0 602833AC
612200E0:      0      0      0      0      0      0      0      0 603F0E50

```

```
---- block1 ptr=61222AF0 is_malloc=0 ----
```

```
...
...
...
```

```
---- block95 ptr=66682064 is_malloc=0 ----
```

```

66682024:      0      0      0      0      0      0      0      0      0
66682044:      0      0      0      0      0      0      0      0      0
66682064:      0      0      0      0      0      0      0      0      0
66682084:      0      0      0      0      0      0      0      0      0
666820A4:      0      0      0      0      0      0      0      0      0
666820C4:      0      0      0      0      0      0      0      0      0
666820E4:      0      0      0      0      0      0      0      0      0
66682104:      0      0      0      0      0      0      0      0      0
66682124:      0      0      0      0      0      0      0      0      0
66682144:      0      0      0      0      0      0      0      0      0

```

```
==== End of Crashinfo Collection =====
```

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