

```
1. BUG_ON(ret != 1);
```

当ret != 1时，crash，条件正好与常规的assert相反。

in include/asm-generic/bug.h

```
1. #ifndef HAVE_ARCH_BUG_ON
2. #define BUG_ON(condition) do { if (unlikely(condition)) BUG(); } while (0)
3. #endif
```

在ARM arch上好像没有定义HAVE_ARCH_BUG_ON

in arch/arm/include/asm/bug.h

```
1. #define BUG() _BUG(__FILE__, __LINE__, BUG_INSTR_VALUE)
```

这里的BUG_INSTR_VALUE定义如下

```
1. /*
2.  * Use a suitable undefined instruction to use for ARM/Thumb2 bug handling.
3.  * We need to be careful not to conflict with those used by other modules and
4.  * the register_undef_hook() system.
5.  */
6. #ifdef CONFIG_THUMB2_KERNEL
7. #define BUG_INSTR_VALUE 0xde02
8. #define BUG_INSTR(__value) __inst_thumb16(__value)
9. #else
10. #define BUG_INSTR_VALUE 0xe7f001f2
11. #define BUG_INSTR(__value) __inst_arm(__value)
12. #endif
```

即用一条undefined instruction来使系统报错。

对应的反汇编码大致如下

```
1. ff0: e3750001 cmn r5, #1
2. ff4: 1affffdb bne f68 <i2c_pxa_xfer+0x54>
3. ff8: e7f001f2 .word 0xe7f001f2
4. ffc: e3510000 cmp r1, #0
5. 1000: bafffff1 blt fcc <i2c_pxa_xfer+0xb8>
```

.word 0xe7f001f2

就是插入的undefined instruction.

