

Test case

Group 6

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1 DirectoryWalker:

```
10.0.2.15# cc dir.c -o directoryWalker
10.0.2.15# ./directoryWalker /root
/root:
1015 a          985 inodeBitmap.c      981 zoneBitmap.c
1009 dir.c      1014 inodeWalker.c      1013 zoneWalker.c
1011 directoryWalker 1018 syscl_fs.h

/root/a:
1016 b

/root/a/b:
1017 aaa.txt
10.0.2.15# _
```

2 iNodeBitMapWalker:

```
run/User/1000/gvfrs/ftp.host=127.0.0.1.port=2222/var/log/messages - Sublime Text
messages
22 Apr 27 02:53:35 10.0.2.15 kernel: flags = DIRTY
23 Apr 27 02:53:35 10.0.2.15 kernel:
24 Apr 27 02:53:35 10.0.2.15 kernel: Loading inode bitmap from disk ...
25 Apr 27 02:53:35 10.0.2.15 kernel: done.
26 Apr 27 02:53:38 10.0.2.15 kernel: ===== Used inodes =====
27 Apr 27 02:53:39 10.0.2.15 kernel:
28 Apr 27 02:53:39 10.0.2.15 kernel: =====
29 Apr 27 02:53:39 10.0.2.15 kernel: 0,
30 Apr 27 02:53:39 10.0.2.15 kernel: 1, 2, 3, 4, 5,
31 Apr 27 02:53:39 10.0.2.15 kernel: 6, 7, 8, 9, 10,
32 Apr 27 02:53:39 10.0.2.15 kernel: 11, 12, 13, 14, 15,
33 Apr 27 02:53:39 10.0.2.15 kernel: 16, 17, 18, 19, 20,
34 Apr 27 02:53:39 10.0.2.15 kernel: 21, 22, 23, 24, 25,
35 Apr 27 02:53:39 10.0.2.15 kernel: 26, 27, 28, 29, 30,
36 Apr 27 02:53:39 10.0.2.15 kernel: 31, 32, 33, 34, 35,
37 Apr 27 02:53:39 10.0.2.15 kernel: 36, 37, 38, 39, 40,
38 Apr 27 02:53:39 10.0.2.15 kernel: 41, 42, 43, 44, 45,
39 Apr 27 02:53:39 10.0.2.15 kernel: 46, 47, 48, 49, 50,
40 Apr 27 02:53:39 10.0.2.15 kernel: 51, 52, 53, 54, 55,
41 Apr 27 02:53:39 10.0.2.15 kernel: 56, 57, 58, 59, 60,
42 Apr 27 02:53:39 10.0.2.15 kernel: 61, 62, 63, 64, 65,
43 Apr 27 02:53:39 10.0.2.15 kernel: 66, 67, 68, 69, 70,
44 Apr 27 02:53:39 10.0.2.15 kernel: 71, 72, 73, 74, 75,
45 Apr 27 02:53:39 10.0.2.15 kernel: 76, 77, 78, 79, 80,
46 Apr 27 02:53:39 10.0.2.15 kernel: 81, 82, 83, 84, 85,
47 Apr 27 02:53:39 10.0.2.15 kernel: 86, 87, 88, 89, 90,
48 Apr 27 02:53:39 10.0.2.15 kernel: 91, 92, 93, 94, 95,
49 Apr 27 02:53:39 10.0.2.15 kernel: 96, 97, 98, 99, 100,
50 Apr 27 02:53:39 10.0.2.15 kernel: 101, 102, 103, 104, 105,
51 Apr 27 02:53:39 10.0.2.15 kernel: 106, 107, 108, 109, 110,
52 Apr 27 02:53:39 10.0.2.15 kernel: 111, 112, 113, 114, 115,
53 Apr 27 02:53:39 10.0.2.15 kernel: 116, 117, 118, 119, 120,
54 Apr 27 02:53:39 10.0.2.15 kernel: 121, 122, 123, 124, 125,
```

```
10.0.2.15# cc inodeWalker.c -o inodeWalker
10.0.2.15# ./inodeWalker_
```



```
/run/user/1000/gvfs/ftp:host=127.0.0.1,port=2222/vw/log/messages - Sublime Text
messages
162 Apr 27 02:53:44 10.0.2.15 kernel: Virtual node released.
163 Apr 27 02:53:53 10.0.2.15 kernel: HEY I AM DO ZONE WALKER
164 Apr 27 02:53:53 10.0.2.15 kernel: fsdriver_zwalker() ==>
165 Apr 27 02:53:53 10.0.2.15 kernel: --- ZONEWALKER ---
166 Apr 27 02:53:53 10.0.2.15 kernel: Getting super node from device 896 ...
167 Apr 27 02:53:53 10.0.2.15 kernel: ninodes      = 32768
168 Apr 27 02:53:53 10.0.2.15 kernel: nzones     = 32768
169 Apr 27 02:53:53 10.0.2.15 kernel: imap_blocks = 2
170 Apr 27 02:53:53 10.0.2.15 kernel: zmap_blocks = 1
171 Apr 27 02:53:53 10.0.2.15 kernel: firstdatazone = 517
172 Apr 27 02:53:53 10.0.2.15 kernel: log_zone_size = 0
173 Apr 27 02:53:53 10.0.2.15 kernel: maxsize     = 2147483647
174 Apr 27 02:53:53 10.0.2.15 kernel: block size  = 4096
175 Apr 27 02:53:53 10.0.2.15 kernel: flags       = DIRTY
176 Apr 27 02:53:53 10.0.2.15 kernel:
177 Apr 27 02:53:56 10.0.2.15 kernel: Loading zone bitmap from disk ...
178 Apr 27 02:53:56 10.0.2.15 kernel: done.
179 Apr 27 02:53:56 10.0.2.15 kernel:
180 Apr 27 02:53:59 10.0.2.15 kernel: ===== Used blocks =====
181 Apr 27 02:54:01 10.0.2.15 kernel: 4123, 4124, 4125, 4126,
182 Apr 27 02:54:01 10.0.2.15 kernel: 4127, 4128, 4129, 4130, 4131,
183 Apr 27 02:54:01 10.0.2.15 kernel: 4132, 4133, 4134, 4135, 4136,
184 Apr 27 02:54:01 10.0.2.15 kernel: 4137, 4138, 4139, 4140, 4141,
185 Apr 27 02:54:01 10.0.2.15 kernel: 4142, 4143, 4144, 4145, 4146,
186 Apr 27 02:54:01 10.0.2.15 kernel: 4147, 4148, 4149, 4150, 4151,
187 Apr 27 02:54:01 10.0.2.15 kernel: 4152, 4153, 4154, 4155, 4156,
188 Apr 27 02:54:01 10.0.2.15 kernel: 4157, 4158, 4159, 4160, 4161,
189 Apr 27 02:54:01 10.0.2.15 kernel: 4162, 4163, 4164, 4165, 4166,
190 Apr 27 02:54:01 10.0.2.15 kernel: 4167, 4168, 4169, 4170, 4171,
191 Apr 27 02:54:01 10.0.2.15 kernel: 4172, 4173, 4174, 4175, 4176,
192 Apr 27 02:54:01 10.0.2.15 kernel: 4177, 4178, 4179, 4180, 4181,
193 Apr 27 02:54:01 10.0.2.15 kernel: 4182, 4183, 4184, 4185, 4186,
194 Apr 27 02:54:01 10.0.2.15 kernel: 4187, 4188, 4189, 4190, 4191,
```

4 Damage InodeBitmap

```
10.0.2.15# cc damageInodeBitmap.c -o damageInodeBitmap
10.0.2.15# ./damageInodeBitmap_
```

```

10.0.2.15#

```

Recover InodeBitmap

```
10.0.2.15# cc inodeBitmap_recovery.c -o inodeBitmap_recovery
10.0.2.15# ./inodeBitmap_recovery_
```


[illegible]