Debugging.TV

Frame 0x0A

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MEMORY DUMP ANALYSIS SERVICES
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Topics

- Platform independent memory dump analysis
- Platform independent MDA patterns
- Exception Thread pattern (on Mac OS X)
- WER vs. MER and WinDbg vs. GDB

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Exception Thread

```
void bar()
{
    int *p = NULL;

    *p = 1;
}

void foo()
{
    bar();
}

int main(int argc, const char * argv[])
{
    foo();
    return 0;
}
```

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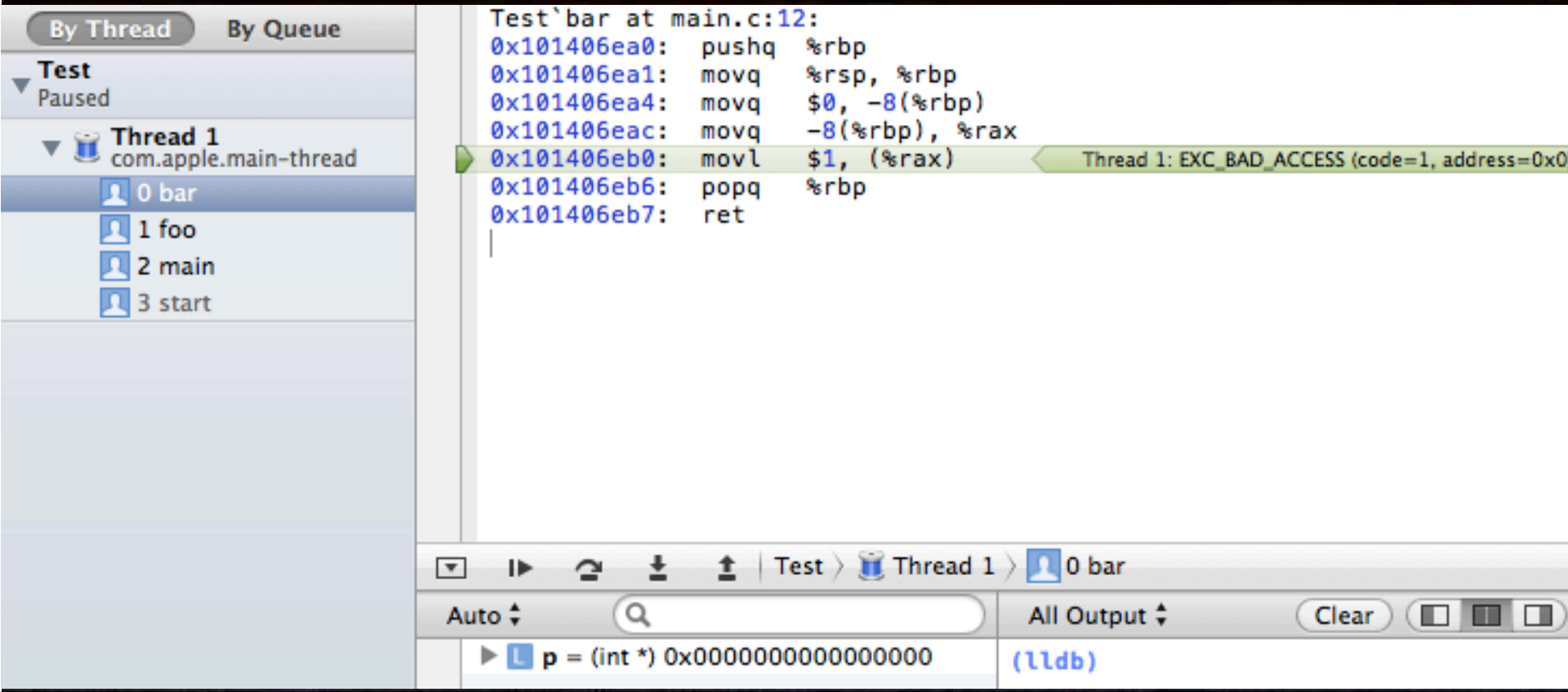
Xcode



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Terminal and GDB

```
Dmitrys-MacBook-Air:/ DumpAnalysis$ ulimit -c unlimited

Dmitrys-MacBook-Air:/ DumpAnalysis$ ulimit -a
core file size          (blocks, -c) unlimited
[…]

Dmitrys-MacBook-Air:/ DumpAnalysis$
/Users/DumpAnalysis/Library/Developer/Xcode/DerivedData/Test-
adsepuwnmyotiyfiajcuyqrwjzmy/Build/Products/Debug/Test
Segmentation fault: 11 (core dumped)

Dmitrys-MacBook-Air:/ DumpAnalysis$ ls /cores
core.5494

Dmitrys-MacBook-Air:/ DumpAnalysis$
/Applications/Xcode.app/Contents/Developer/usr/bin/gdb
/Users/DumpAnalysis/Library/Developer/Xcode/DerivedData/Test-
adsepuwnmyotiyfiajcuyqrwjzmy/Build/Products/Debug/Test /cores/core.5494
```

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Debugger Output

```
GNU gdb 6.3.50-20050815 (Apple version gdb-1752) (Sat Jan 28 03:02:46 UTC 2012)
Copyright 2004 Free Software Foundation, Inc.
GDB is free software, covered by the GNU General Public License, and you are
welcome to change it and/or distribute copies of it under certain conditions.
Type "show copying" to see the conditions.
There is absolutely no warranty for GDB.  Type "show warranty" for details.
This GDB was configured as "x86_64-apple-darwin"...
Reading symbols for shared libraries .. done

Reading symbols for shared libraries . done
Reading symbols for shared libraries ......................... done
#0  0x000000010eb07eb0 in bar ()
    at /Users/DumpAnalysis/Documents/MacOSX-Debugging/Test/Test/Test/main.c:15
15              *p = 1;
(gdb) where
#0  0x000000010eb07eb0 in bar ()
    at /Users/DumpAnalysis/Documents/MacOSX-Debugging/Test/Test/Test/main.c:15
#1  0x000000010eb07ec9 in foo ()
    at /Users/DumpAnalysis/Documents/MacOSX-Debugging/Test/Test/Test/main.c:20
#2  0x000000010eb07eeb in main (argc=1,
    argv=0x7fff6e706ad0)
    at /Users/DumpAnalysis/Documents/MacOSX-Debugging/Test/Test/Test/main.c:25
Current language:  auto; currently minimal
(gdb) q
```

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April 2, 2012: Introduction to Software Narratology (free)

April 11-16, 2012: Accelerated Windows Memory Dump Analysis

April 20-23, 2012: Advanced Windows Memory Dump Analysis

April 27-30, 2012: Accelerated Software Trace Analysis

Forthcoming: Accelerated Mac OS X Core Dump Analysis
Linux Core Dump Analysis
Deep Down C++

Training Schedule

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Happy St. Patrick's Day!