

ndnSIM - Bug #2535

GlobalRoutingHelper - CalculateAllPossibleRoutes SEGFAULTS - fix included

02/18/2015 05:39 AM - Christian Kreuzberger

Status:	Closed	Start date:	02/18/2015
Priority:	Normal	Due date:	
Assignee:	Spyros Mastorakis	% Done:	100%
Category:	helpers	Estimated time:	0.50 hour
Target version:	2.1		
Description			
<p>When calling <code>ndn::GlobalRoutingHelper::CalculateAllPossibleRoutes()</code> I did sometimes receive SEGFAULTS or similar crashes (e.g., 300 nodes created with BRITE).</p> <p>After using <code>valgrind</code> and <code>gdb</code> I identified the problem: https://github.com/named-data/ndnSIM/blob/master/helper/ndn-global-routing-helper.cpp#L316-L320</p> <p>A vector is initialized with <code>.size()</code> elements, though in the for loop the index "faceNumber" is used, which is incremented BEFORE it is used.</p> <p>Therefore, for the last face in this list, you create an invalid write.</p> <p>The fix is rather easy: do not increment faceNumber until the end of the loop. I've attached a <code>.diff</code> file (and the full file) to this bug report.</p>			

History

#1 - 02/18/2015 08:53 AM - Spyros Mastorakis

- Category changed from heper to helpers
- Status changed from New to Code review
- Assignee set to Spyros Mastorakis
- % Done changed from 90 to 100

Originally reported by Christian Kreuzberger.

#2 - 02/18/2015 10:47 AM - Alex Afanasyev

Christian, can you post a sample scenario to verify expose the problem (and to verify that it was fixed)?

#3 - 02/18/2015 11:16 AM - Christian Kreuzberger

- File `ndn-routing-crash.cc` added

Here is an example (attached). It has something to do with the amount of faces you have on a certain node, hence the "arbitrary" construct of p2p links.

#4 - 02/18/2015 11:30 AM - Spyros Mastorakis

Christian thank you very much for the sample scenario.

@Alex, I confirm that before the fix on Ubuntu 14.04 I got a segmentation fault. After the patch, the scenario run successfully. On OS X 10.10, I did not test before the patch. I tested after the patch, though, and the scenario run successfully.

#5 - 02/18/2015 07:23 PM - Spyros Mastorakis

- Status changed from Code review to Closed

Files

patch.diff	1.45 KB	02/18/2015	Christian Kreuzberger
ndn-global-routing-helper.cpp	12.8 KB	02/18/2015	Christian Kreuzberger
ndn-routing-crash.cc	3.56 KB	02/18/2015	Christian Kreuzberger