Subject: Re: NaN Magic Bingo!
Posted by R.Bauer on Mon, 19 Nov 2007 09:19:41 GMT
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Peter Mason schrieb:
> Mort Canty wrote:
> <...>
>> It was the CISCO VPN client! Thank you Peter. That was the best four
>> cents I ever got! If you're ever anywhere near the town of Juelich,
>> Germany, let me know. I owe you a big, cold, German beer.
>>
>> Mort
>>
>> PS. CISCO -> The Cisco Kid (50's radio) -> Mexico -> Coyote ... David
>> was right, as usual.
>
> Thanks Mort, I'll keep that beer in mind. I've never actually been to
> Germany, even though my mother grew up next door (Switzerland).
> I'm glad it worked out. It's hard to believe that something as mainstream
> as VPN Client 4.x could have such a glitch in it but there you go. Seems
> none of us software developers are safe from bugs.
> In case anyone's curious, here's a simple little test routine that uses
> brute force to expose the bug. (Sorry it's in C.)
>
> Cheers
> Peter

Dear Peter

thanks for pointing this out. Do you have knowledge on which platforms
this trouble occure. Does the cisco code affect all platforms.

cheers
Reimar

>
> // Little FP integrity checker. MUST be called with VAL=1.
>
> // Returns 0 if okay and 1 if not.
>
> #pragma optimize("", off) //a smart compiler might see me coming and
> avoid some of my calcs
>

```
>  static int FPIntegrity(HWND hw, int val)
>
>  {
>
>  register double a=val, b=val, c=val, d=val, e=val, f=val;
>
>  register int i, j, k;
>
>  for( j=1, k=0; j && (k<1000); ++k ) {
>
>  for( i=0x00400000; i&&j; --i ) { //do some simple calcs that shouldn't
>  change B, C, D, E or F (they should all remain at 1.0)
>
>  b *= a;
>
>  c += a-b;
>
>  d += b-a;
>
>  e *= b+c-d;
>
>  f -= (a-b+c-d)*e;
>
>  if( a-b+c-d+e-f ) {
>
>  char tx[256];
>
>  j=0;
>
>  sprintf( tx, "Floating-point Integrity broke on iteration %d.\nThe following
>  numbers should all have been 0:\n%f %f %f\n%f %f %f",
>  k,a-1,b-1,c-1,d-1,e-1,f-1 );
>
>  MessageBox( hw, tx, "Warning", MB_ICONWARNING|MB_OK|MB_TOPMOST );
>
>  } }
>
>  }
>
>  return j ? 0 : 1;
>
>  }
>
>  #pragma optimize( "", on )
>
>
```

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