Reports this week have claimed that the internet is in danger of becoming “full” because the number of internet connections rose above a crucial limit. A small number of sites could have been taken momentarily offline by the issue with the infrastructure supporting parts of the internet.

The issue revolved around a limit on the number of concurrent connections made to routers that underpin the internet. These operate in a similar manner to home routers spreading data about the global internet, rather than simply within a single address.

“Old hardware that is at least five years past its end-of-life sulked, because it ran out of memory,” explained James Blessing, chair of the [Internet](http://www.theguardian.com/technology/internet) Service Providers Association, which has close to 300 members across the UK.

**‘The address book filled up’**

“The problem revolved around TCAM memory - which is like an address book - getting full,” Blessing told the Guardian. “The default settings have 512,000 entry spaces. It reached 512,000 entries last week when an internet service provider (ISP) had a problem and leaked some address space, which caused some older boxes at other [ISPs](http://www.theguardian.com/technology/isps) to fail.”

ISPs have known about this issue for a while. Cisco, which manufactures a large chunk of the hardware used by ISPs, [put out a notice about the issue in May](https://supportforums.cisco.com/document/12202206/size-internet-global-routing-table-and-its-potential-side-effects), but some ISPs have been slow to fix the problem.

“There is a fix for the issue - you can simply change some values on the boxes and then restart the entire machine,” said Blessing. “Unfortunately these boxes have hundreds of customers attached to them so getting permission from them all to do that is a pain.”

That has caused some ISPs to put off the reboot, which would momentarily take websites connected to the box offline, until it caused a brief issue last week.

**Dominos**

Because some of the properties that suffered issues are interlinked it created larger domino-like problem for other sites.

Blessing explained that if an ad-server was hit, then ads wouldn’t show up on websites making them look broken, or if an authentication service that lets users log into other sites with a single username and password – like Facebook, for instance – then those sites would be disrupted.

The issue could be described in a similar manner to the Y2K bug – something that could have caused major issues for the internet if it hadn’t been fixed, but the fix was simple and in most cases completed within plenty of time.

**‘The 512k bug’**

“In the grand scheme of things, it’s tiny,” said Blessing. “It’s a glitch, glitches happen.”

“If someone at an ISP hasn’t noticed it by now, it’s too late as the default table is over 512,000, so nothing that had this problem is now connected to the internet and working,” he said.

“We’ve had the glitch and nothing further will happen now concerning the 512,000 bug.”

The advice from experts is that if internet users haven’t noticed any issues by now they won’t see anything happening from now on. The internet is safe for now