the Availability Digest

Tussling with the Word "Redundant"
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One of the British contributors to our recent series of articles on OpenVMS,[1] Colin Butcher of XDelta Limited, had an objection to our use of "redundant." We have consistently used "redundant" to mean "backup," as in "redundant nodes," "redundant database copies," "redundant communication links," and so on. If a system is redundant, it means that it can continue in operation should one of its redundant components fail. The system continues in operation using other backup components.

Redundancy can take many forms. In an active/backup system, one system is actively providing all processing; and the redundant system is standing by, prepared to take over should the active system fail.

An active/active system is a redundant system with two or more nodes all cooperating in a common application. Should one node fail, all further transactions are routed to the surviving nodes, which will assume the load normally handled by the failed node.

Likewise, redundant communication links can be used in an active/backup configuration, in which case one link is idle but is prepared to take over the functions of the active link should it fail. Alternatively, the redundant links can be sharing the communication load. Should one fail, all traffic is routed over the surviving link, which must be configured to handle all of the communication traffic.

Backup batteries provide power for a short while to a data center following a power failure, long enough for the backup diesel generators to kick in. Both the batteries and the diesel generators are redundant components in that the system can run fine without them so long as primary power is accessible. They are used only in the event of a primary power failure.

And so on.

Perhaps, unfortunately, the Availability Digest has an American heritage. It is, after all, written by Americans in English. But is American English the same as English in other cultures? Colin's comment spreads doubt about that.

He points out that in the U.K., "redundant" means "unnecessary," as in "His job was made redundant, so he was let go." Therefore, to the British, adding redundancy to a system may mean that we are adding unnecessary components. This hardly makes sense.

Colin suggests, instead, that we use the word "replicate." Thus, an active/active system would be a replicated set of nodes sharing a common workload.

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[1] OpenVMS Active/Active Split-Site Clusters, *Availability Digest*; June, 2008.
  NHSBT: UK National Health Service – Blood and Transplant, *Availability Digest*; October, 2008.

This usage works for me; but, unfortunately, we have a body of articles and information that is already wedded to the use of the word "redundant" as meaning "backup." It is too late for us to change, though perhaps we could be more sensitive to this confusion in the future.

It is interesting to see what the dictionary has to say about this matter. These are the definitions found in the Merriam-Webster dictionary:[2]

- serving as a duplicate for preventing failure of an entire system (as a spacecraft) upon failure of a single component (right on!)
- exceeding what is necessary or normal (I can live with that one)
- superfluous
- characterized by or containing an excess
- using more words than necessary

It goes on to add a specific British usage:

- *chiefly British*: no longer needed for a job and hence laid off (Colin's use of the word)

The word "redundant" is probably not the only example of confusion. Though I don't (yet) know of any other words that can have confusing meanings, there are certainly some that simply don't translate. Try telling an American that "This is bespoke software." You'll almost certainly get a blank stare. But to the British, this is a common way to refer to custom software. When I first asked my British counterpart what "bespoke software" was, he replied, "Why, it is just like a bespoke suit." Big help!

As Winston Churchill so aptly said when comparing the Americans and the British, "We are two nations divided by a common language." So we are.

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[2] www.merriam-webster.com