



OPINION · NETWORK MEASUREMENT

Measuring Badly Is Worse Than Not Measuring

Most verdicts on a network are feelings. The ones that come from a bad measurement are worse, because they feel like facts.

An impression is not data.

Every few weeks, a connection becomes the villain. Lately it has been Digi Spain's fibre, with a run of posts claiming it slows down at night. I am on that line myself and had noticed nothing of the sort, but noticing nothing is not evidence either. So I did what an engineer should do before forming an opinion: I measured it. Two XVOLV Link units on the line, continuously, for 45 days.

The line was fine. Zero outages, stable latency, speeds close to the real ceiling the technology allows. I will spare you the full dataset here. What I want to talk about is not whether Digi's fibre is good. It is how easily you can be made to believe it is bad.

An impression is not data.

Start with the tool most people reach for: the speed test built into the router. On this line, it reported about 2.5 Gbps. The line was delivering over 7. Not because the router was wrong about the line, but because of the servers the test happened to pick. A speed test is only as good as the server at the other end, and most choose badly. Judge a 10 Gbps line by that number and you would raise a fault for a line that is working perfectly.

A speed test is only as good as the server it picks.

It gets subtler. I plotted the speed across the week as a heatmap, the kind of chart that makes a pattern jump out. And a pattern jumped out: some hours looked slow, others fast. It looked like congestion. It was nothing of the sort. Different test targets have different ceilings, and once I normalised each against its own usual value, the chart went flat. The pattern had come from the measurement, not the network. I had very nearly discovered a problem that did not exist.

This is the part worth sitting with. We tend to assume that some measurement is better than none, that a number, any number, beats a guess. It is not true. A bad measurement does not leave you uninformed. It leaves you confidently wrong. It invents problems that are not there and, just as easily, hides the ones that are. Measuring badly is worse than not measuring, because at least a feeling knows it is a feeling.

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Good measurement is not a speed test you run when you are annoyed. It is continuous, so you see patterns rather than moments. It is interpreted, so a dip is checked against the target, the time of day and the other instruments on the line before anyone calls it a fault. And it is correlated, so you can tell the operator failing apart from something in your own network. Do that, and the night-time myth dissolves, the router's wrong number is caught, and the heatmap's false pattern disappears.

I cannot tell you whether Digi's fibre is good everywhere. I can tell you that this line, measured properly for 45 days, did what it should, and that almost every tool a normal person would reach for to check would have told them otherwise. The lesson is not about one operator. It is that a verdict on a network delivered without careful measurement is just a feeling, and a verdict delivered from a careless one is worse: a feeling wearing the clothes of a fact.

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The full dataset behind this piece is published separately as "45 Days on a 10 Gbps Line", a Link field study.