

# Developing Metrics for Network Performance

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For many of us, networks and network performance is something of a mystery. If we are looking at a performance problem, and nothing seems to be wrong, the next step is frequently summed up as "toss it over the wall to the network guys, and see if they can find something." Certainly I've done that enough times over the years.

But that is probably not how we ought to be approaching the situation. Networks are just one more part of our world, no different in principle from processors, storage or memory. If there is a performance issue, we ought to know how to look for it, and what to recommend to redress any problems we find. As it turns out, measuring performance for networks is still a field in its early stages. There are some standard metrics, but there is plenty of room for more and improved metrics. And here's where that is happening:

The standards body for networks in general, for the ways that they work and what happens on them, is an organization called the **Internet Engineering Task Force (IETF)**. And even though the organization's name says "Internet," the design decisions that they make impact any and all networks . . . including yours. They have recently started an effort to bring some standardization to the area of network performance.

The IETF works thru a collection of Working Groups, each chartered to focus on a specific topic. The new Working Group is the IP Performance metrics (IPPM). Here's the first part of their charter:

The IP Performance Metrics (IPPM) Working Group *develops and maintains standard metrics* that can be applied to the quality, performance, and reliability of Internet data delivery services and applications. It also *develops and maintains protocols for the measurement of these metrics*. These metrics are designed such that they can be performed by network operators, end users, or independent testing groups. Metrics developed by the IPPM WG are intended to provide unbiased quantitative performance measurements and not a value judgment. [emphasis added]

There's just one thing. The IETF is long on academic expertise, on experience from running Internet Service Providers (ISPs), and on experience with vendors making network hardware. Experience with actual performance measurement? Not so much. So anyone here at CMG could probably make a valuable contribution.

How would you get involved? Well, the IETF is an organization made up entirely of individuals who decided to get involved personally. (To the point that, if you suggest that your company's management might have something to say about you making statements on an issue, because as an employee you represent them, you get a lot of blank looks.) So all you have to do is go onto the IETF website page for the working group you care about (e.g. IPPM), and sign up for their mailing list. If you want to get involved, or even just want to have some influence over the decisions which will increasingly impact your job, check it out.