Planning for IPv6

Seven golden rules for implementing IPv6.

Linda Leung, Network World August 17, 07

IPv6 is not a "maybe" that could be 10 or 20 years out in the future; it is a hard reality that you are going to encounter, possibly before the end of this decade, says Jeff Doyle, noted IP routing expert and author of Routing IP, published by Cisco Press. In his **blog** for Cisco Subnet, Doyle details his top seven considerations for rolling out IPv6.

1. Control the cost: It's not true that shifting to IPv6 would involve ripping out your existing network and putting in a full-scale replacement. If you've kept up with your product updates, a lot of your equipment would already be IPv6-capable, according to Doyle. The products you need to check closely for IPv6 support are network management and security products, he says. You can also significantly reduce IPv6 implementation expenses with a good implementation plan that spans a multi-year timeline.

2. Embark on a feasibility study: IPv6 is not an objective; it's a potential solution to a problem. The first question to ask is, "What's the problem I'm trying to solve?" By identifying that you would be able to get a clear picture of where you are going, why you are going there and what you might face on the way, says Doyle.

3. Don't regard it as IPv6 transition; it's IPv6 implementation: Transition implies that you are replacing one technology with another, whereas implementation implies that you are adding a technology to what you already have. And in most cases, that's what you'll be doing with IPv6: adding it to your network, not replacing IPv4. The result means that IPv4 and IPv6 would co-exist on your network.

4. Take stock: You must know what you have in order to understand what must be changed in an IPv6 implementation, and the only way to understand that is to take an inventory. A simple "supports IPv6" checkbox is insufficient; from the feasibility study you should know what IPv6 features must be supported, and your inventory checklist should reflect that.

5. Don't skip the all-important test lab: Setting up a test lab - whether as part of a plan to implement IPv6 or another technology - is important for the safe introduction of new technology into your network. This is true even if your organisation has a small network, or if the network is managed by a service provider. Get the backing of those who sign the cheques by explaining how the test lab would reduce operational expenses, reduce network risk, and increase network up-time and availability.

6. Set milestones and methodologies: Armed with the facts and data from the feasibility study, the inventory, and the results of your lab evaluations, you can establish accurate costs and set a realistic, detailed timeframe for your implementation project.

7. Start now on training: Plan to bring your understanding of IPv6 to the equivalent level with your understanding of IPv4. The good news is that because you already understand IPv4, getting up to speed on IPv6 is not difficult; it's not that different. a training plan that spans a reasonably long time -- two or three years or more -- can save you money. But again like the overall IPv6 implementation plan, you need to get started now on your training plan.