

Tips to Improve Network Performance - IO



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It's no exaggeration to state that networks lie at the heart of every **data center**. Without fast, efficient and reliable network support, servers and storage systems become little more than expensive pieces of metal furniture. Obtaining the best possible network performance is an important first step toward ensuring overall data center excellence. But where to begin? Consider focusing on these vital areas:

Build a Solid Network Core. All types of networks, from WANs to SANs, depend on a solid network core. If the data center's network core is inadequate, outdated, flawed or deficient in any significant way, network performance will suffer. As you begin working to enhance overall network performance, start at the network core.

Use Quality Hardware. The network hardware market has become increasingly commoditized over the past several years, with vendors and customers both seeking ever lower prices. Yet cutting corners too deeply can lead to serious equipment quality issues, resulting in sub-par network performance as well as high rates of equipment failure. The best approach is to make sure that you're using "name brand" hardware, which over the long run is almost always a better value than "white box" equipment.

Opt for Fiber. Use fiber whenever and wherever possible for long-distance, high-demand applications. Fiber's quality and performance benefits over copper cables, including lower attenuation rates and high interference resistance, are well known and documented. Whenever there's a choice, opt for fiber.

Seek Network Diversity. Expecting a single network carrier to provide optimal service continuously and over every possible route is sort of like trying to fly around the world on a single airline—potentially convenient, yet realistically impossible. Network diversity, in the form of **blended bandwidth**, gives you multiple carrier and routing options that are critical for ensuring network performance excellence.

Monitor Performance. You can't accurately judge network performance or quality without first gathering and analyzing relevant data. If don't have the time, manpower or equipment to fully monitor network performance, it makes sense to get a qualified outsider to do the job. In fact, if you aren't positioned to handle monitoring on your own, you're probably failing in other network areas as well. If this situation describes your data center, consider using in a capable provider to manage your network services.

Don't Forget the Apps. Most network data traffic originates and terminates at an application. Having apps that use data efficiently is an important yet often overlooked key to optimal network performance. Vendor-supplied configuration settings, for instance, may not match your particular needs. Check your apps' network settings today and make whatever adjustments are necessary.

Embrace the New. It's easy to fall into a rut and rely on the same network technologies and practices year after year. Businesses tend to get into this position by exercising excessive caution. While it's difficult to abandon a functional network strategy in favor of something that may, at least at first glance, seem somewhat strange and risky, failing to innovate means that your organization may be failing to embrace performance enhancing and cost cutting new network approaches. Addressing this situation leads us to our next point...

Create a Test Bed. In a world of rapidly expanding and evolving network options, accepting or rejecting new technologies without on-site testing reduces a key part of network planning to the level of throwing darts at a dartboard. Dedicating just a single server to testing new or enhanced network approaches will let you create accurate real world performance forecasts at a relatively modest cost.

Learn From Others. While imitation is the sincerest form of flattery, it can also be a great learning tool. Looking at how businesses similar to yours deploy and use their network services can help you improve your organization's network performance. On the flip side, studying businesses that have experienced major network meltdowns can provide object lessons in how not to manage network operations.

Tags: Blended Bandwidth, data center, Network

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