



Top 10 Data Center Network Switch Considerations

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Price/Performance – More for Less

How will you choose a network solution for your data center to deliver the right blend of performance and cost efficiency?

Performance isn't just throughput. It's also the intelligence to support your applications with a high quality of experience.

- Consider the demands in different parts of the network. The aggregation or spine of the network has different requirements than the top of rack.
- Dig into its ease of deployment and operational costs.
- Find out about its protocols, port speeds, and future-proofing.
- Evaluate the options: ranging from white boxes switches to traditional switches to next generation platforms built on custom ASICs.

Then you'll be well on the way to getting more for less.

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Smart Rack Space Solutions

Space is almost always at a premium in data centers. Servers are made to be as space efficient as possible.

A data switch linking them together has to fit into the minimum amount of space too.

High port density enables a switch to support more physical connections with higher speeds per square inch of rack space.

- Higher data switch port density can:
- Simplify your networks and operations
- Enable you to do more with less
- Consolidate and streamline the network architecture
- Reduce overall power and cooling requirements

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Power Consumption – Switch to Green

If power bills make you see red, look for a data switch that saves on energy. The planet will thank you and so will your finance department.

The key to energy efficiency is doing more with less. The higher capacity a switch is means it is doing the job of many smaller switches, which will almost always lead to power savings.

Keep your network turned on, not burnt out. And do it all while saving on energy and cooling.

4



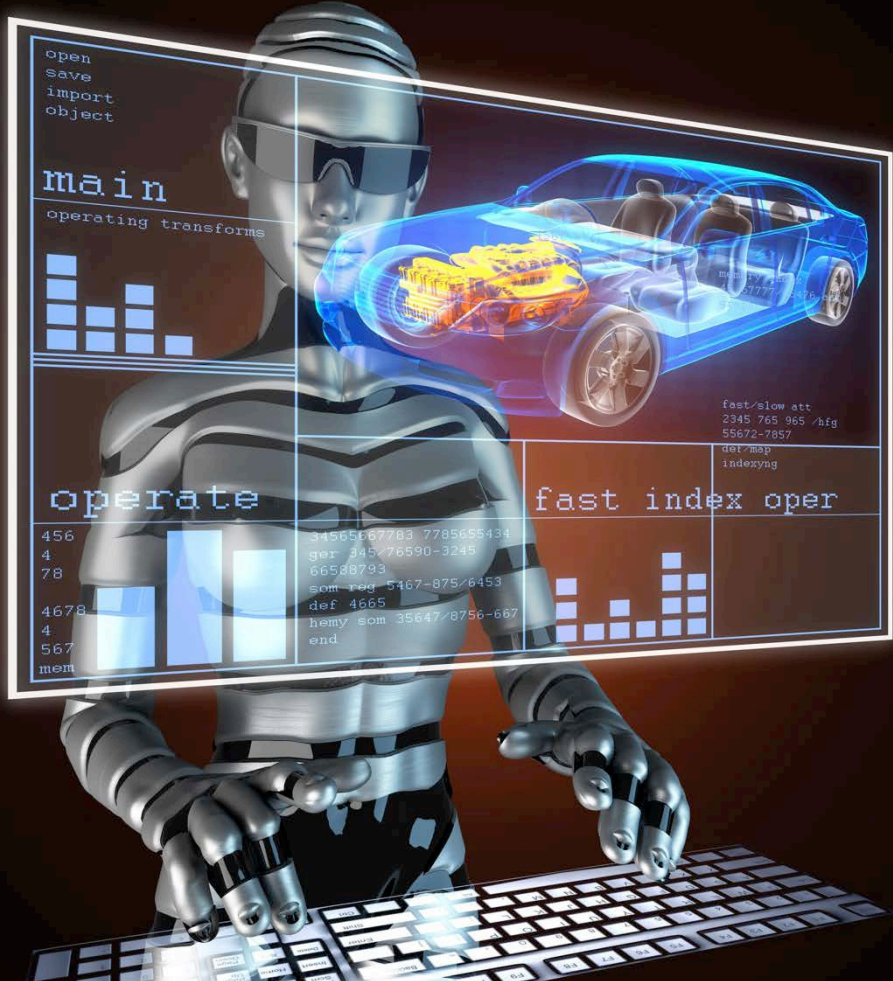
Multi-Dimensional Performance beyond Raw Throughput

Like elite athletes, a data center switch has to deliver performance in multiple dimensions. Pure throughput is only part of the story.

It also has to deliver high levels of logical scale. A memory architecture that can support deep buffers, lots of filters, host prefixes and MAC addresses will ensure your network doesn't hit a performance wall before you can use the full capacity of the switch.

Look for a well rounded data center switch that scales in multiple dimensions.

5



Automation to Free Up Resources

Is your network team tied up with repetitive, boring and manual tasks? Save them time and you money with network automation.

Network automation eliminates time-intensive, resource sucking manual task in multiple areas:

- **Deployment and provisioning.** A good data switch auto-configures and auto-deploys
- **Operations.** The network communicates in real time to help you operate at optimal efficiency.
- **Orchestration.** Automation is not just network-centric; it has to integrate with the entire data center orchestration strategy.

6



Analytics that Bring X-Ray Vision

Imagine that you could look into the soul of your data center network and learn its inner secrets. Too far-fetched? Then choose a data switch that automatically brings you intelligence from the network.

Good analytics will give you X-ray vision to see what the network is doing at both the physical and logical levels. And it will do so proactively, in real-time—not reactively.

You get meaningful and actionable insights you need to adjust, repair and optimize.

Deep and timely analytics capabilities will help you make your network more reliable and efficient and your business more profitable.

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Longevity Means the Demise of Rip and Replace

Some data center switches become rapidly obsolete and enterprises have to throw them away and start again, if they want to grow.

But things don't have to be that way. A good data switch grows with the rest of your data center.

And grow it must. Did 10GbE connectivity seem like a lot last year? Will 40GbE be enough for this year? When is 100GbE on the horizon?

Do not underestimate the need for speed based on today's view.

Buy a data switch that's good to go now and into the future.

A hooded figure, possibly a hacker or a personification of a threat, is shown from the chest up, wearing a dark, textured hood. The figure is set against a background of blue binary code (0s and 1s) that appears to be floating or falling around them. The overall aesthetic is digital and mysterious.

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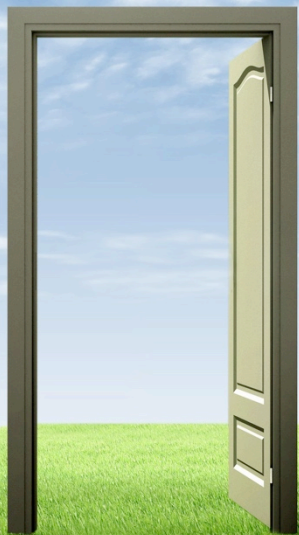
Make Security a Snap

While switches are a key part of a data center network, they are not the only component. Any data center network must be architected with security at the forefront.

After all your data center or private cloud is where your business' most important assets and intellectual property live. You simply can't afford to make security an after thought.

When evaluating options for network security in the data center, consider performance, ease of management and how readily security solutions integrate with the rest of the data center network.

9



Openness to Avoid Lock In

Does your data center keep your options open? Or does it shut a door, locking you in for years to come. Hopefully it's the former.

Rigid, closed and proprietary networks that force costly and disruptive upgrades can be fatal. Simple, open, and smart data center networks enable you to evolve as data center technologies.

You should always be able to move onwards and upwards with your data center network—on an evolutionary, non-disruptive path.

Choose a flexible data switch architecture that avoids vendor lock-in and preserves your freedom for the future.

10



Architectural Flexibility

Today, it's the cloud. Tomorrow, it will be multiple clouds. Systems split, then join up again and multiply as business objectives change.

The switches you choose for your data center network should be capable of supporting multiple types of network architectures and fabrics.

No one can predict the future, so you shouldn't let past decisions dictate your future.

Choosing a switch that can support multiple architectural options helps ensure that you are ready for whatever the future brings to you data center or cloud.

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- ✓ Price/Performance - More for Less
- ✓ Smart Rack Space Solutions
- ✓ Power Consumption - Switch to Green
- ✓ Multi-dimension Performance beyond Raw Throughput
- ✓ Automation to Free Up Resources
- ✓ Analytics That Bring X-Ray Vision
- ✓ Longevity Means the Demise of Rip and Replace
- ✓ Make Security a Snap
- ✓ Openness to Avoid Lock In
- ✓ Architectural Flexibility

A server room with blue lighting and dense network cables. The image shows multiple server racks filled with network equipment and a large number of cables connected to the ports. The overall scene is dimly lit with a strong blue color cast.

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