

## **Should all Network and Data Center Components be Top of the Line?**

From: SearchNetworking and SearchDataCenters

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When looking at technology today, there is a fine line between penny wise and dollar foolish. I have received numerous questions concerning the best products for various applications. One thread holds true throughout many of these: "I need something inexpensive." These tend to be the same companies that do not hold technology in the highest regard, but rather view it as a necessary evil. There is not a company on the planet that could continue to function without its data and/or intellectual property.

There are several products on the market for any application. Some are, of course, going to provide better service than others. This is not to say that all of the lower priced products are inferior or that all of the higher cost products are superior. There are several differentiators that should come into your decision factors. These are not based on MTBF (Mean Time Before Failure) or MTTR (Mean Time to Repair) which are basic considerations that should be examined closely. One caveat on the above, is that you must examine the MTTR and MTBF for each and every component, not just the overall chassis or base system. The cards that go into systems may not carry the same ratings.

Other factors that do not always come into play include:

- Value added services
- Education and Transfer of Knowledge
- Vendor support
- Lead times
- References (not from the vendor)
- Warranty periods and warranty coverage
- Training provided to the installer or reseller you select to do your installation
- Interoperability
- Day 2 services
- Money spent on R&D

Each of the above will make your life easier down the road. Who knows, you might even be able to take a vacation without your cell phone or pager! A vendor scorecard should be developed when you are doing your product evaluations and each of the above should be included with a weighting factor. Weigh each of the above based on the need for your organization.

In the example below, we will compare two core switches for a data center application. Vendor A is a significant market leader. The perception is that their product will be the best because they sell more than others. However, Vendor B has come onto the scene with a litany of other services. Their switch is also well received in the market place but is less expensive than Vendor A. You must justify your decision to the CFO and a purchasing team. The purchasing team is going to be focused on price. The literature between the two companies states the same basic capabilities. Competitive literature gathered by the evaluation team will be used to assist with the evaluations. (Note: pricing in this example is based on averages and this is generic not referring to any one company in particular).

	<b>Vendor A</b>	<b>Vendor B</b>	<b>Weight</b>	<b>Comments</b>
Chassis	65,000	45,000	3	Based on cost alone
Cards	12,000	8,000	3	Based on cost alone
MTBF	100,000	200,000	3	Clue to lifespan
MTTR	Overnight	On site spare – purchased to allow for lower MTTR	4	As a function of downtime – this is a cost avoidance figure
Value Added Services	Seminars, global installation referrals, etc	Will provide on site tech from manufacturer	5	As a function of installation cost
Education and Transfer of Knowledge	Class costs 3,000	Training to be provided by on site technician	3	Day 2 operations – can we manage this internally? How much is the training to accomplish this task? Beware that free on-site training may be deficient for your needs.
Vendor Support	24 x 7 call in – vendor owned	Varies based on installer – manufacturer. as backup	6	Support when things go wrong is VERY important – what if the company doing the installation goes out of business?
Lead Times	8 weeks	6 weeks	2	Important to your project deadline, but can be accommodated with advance knowledge.
References	90% positive	80% positive	6	Check these from sources other than the ones the vendor provides. Look for press releases, information from users groups etc.
Warranty periods and coverage	3 years paid – parts and labor Applications assurance	3 years free- parts only	4	Add cost to your dollar figures, weigh features here
Installer training	Mandated certification levels required	Not required – no program for value added resellers	6	Your system will not work if improperly installed. If they do not have adequate training for your support avenues, you will also have poor support.
Interoperability	Standards based Independently Verified	Standards based – Independently verified	4	You may not ever hook other equipment to this that is not from the same manufacturer, but why limit your possibilities?
Day 2 services and support	Online and via phone – if under warranty no cost	Online and via phone for a fee per incident	6	If you are lucky, you will never need support on day 2, but how many lucky people do you really know?
Dollars on R&D	7% of profit	10% of profit	3	This will dictate upgrades and future products.
Participation in the standards processes	Yes	No – but supports the standards	5	This will help determine if the standards are being interpreted correctly and will also speak to interoperability.

For each category and the others on your ROI/TCO calculations, rate the information given and multiply by the weighting factors you determine are most important to your daily operations. For instance, in the table above, we would assign each vendor a 1 or 2 based on win and/or loss. The winner gets a 2 and the loser gets a 1. Multiplying by each weighting factor will allow you to decide on factors other than price alone. While Vendor A is quite a bit more expensive than Vendor B, at the end of the day, they are far more cost effective. You could also assign a grade value to each category and multiply the grade by the weighting factor. This is particularly useful when you are evaluating multiple vendors.

There is a reason that some equipment is more expensive than others. Programs for end-users, installers/resellers and sales training will provide many benefits after your initial purchase. These programs cost manufacturers money. All of the fees for these additional benefits are part of a manufacturer's cost of doing business. While you may pay more up front, day 2 and beyond you will begin to realize savings over a commodity priced product with no additional services. Some companies price products at a low price to attract dollar conscious only end-users. The following years usually show a marked increase in support dollars. Over time, it does prove to be a penny wise and dollar foolish decision.

This is not an exhaustive list of factors to consider, but certainly the ones that may not fall directly under an ROI/TCO calculation based on price to performance only. These are, however, many of the factors that will assure that you will have proper support and guidance through a business partner, not just a component manufacturer. Remember, there are many behind the scenes costs that will bring you peace of mind and keep you from having to brush up on a resume. If you buy the least costly components based on price alone, your follow on support and services may alter your TCO so severely, that it can become the more expensive solution in a very short period of time. OOOPS!