

Bonus Chapter

Outsourcing SAN Solutions

In This Chapter

- ▶ Weighing outsourcing against doing it yourself
 - ▶ Considering the pros and cons of outsourcing
 - ▶ Crafting a Request for Proposal
 - ▶ Picking a vendor
-

Not that crazy about implementing and operating your storage area network (SAN) yourself, eh? In this chapter, I cover what other options you have if you don't want to do everything on your own. First, I describe outsourcing your storage infrastructure to a storage service provider (SSP). Then I go over the other options, such as getting a specialized storage consultant to help you implement a SAN. Finally, I show you how you can manage the project yourself by defining your requirements in a Request For Proposal (RFP) document and how to work closely with the many SAN component vendors, each pitching its best-of-breed solutions for your particular requirements.

Outsourcing the Whole Operation

Outsourcing is getting an external company to do something that your own employees would normally do within your organization. Because of financial reasons, time constraints, or simple lack of expertise, you *source* this technology and expertise from *outside* the company — hence, you outsource.

The main reasons companies outsource their storage infrastructures are

- ✔ The necessary expertise to handle the job is not available internally.
- ✔ Internal expertise *is* available, but those folks don't have time.
- ✔ Outsourcing is cheaper than buying hardware and supporting it using in-house employees.
- ✔ For political reasons, an external third party can cross political boundaries within the corporate structure without offending anyone when dictating new policies.

That last item is a mouthful, but a true mouthful. When you have a shared storage solution such as a SAN, you have to get the buy-in from all the IT groups as to who controls what and who gets how much storage. Nobody likes to share, so sometimes it's better just to give the responsibility to a neutral party so that no one gets preferential treatment.

A typical example of outsourcing is desktop support. Some companies don't want — or can't afford — to maintain their own internal desktop support for their employees' PCs. They pay an external entity to furnish an entire staff to handle help-desk calls, take care of troubleshooting problems, and fix broken PCs or upgrade older desktops to newer models.

By having an external company handle a task, you don't have to have a staff of internally trained people who spend their time on more generic tasks when they can be focused on more business-centric tasks. In the case of desktop support, for example, the tasks involved are not specific to financial, pharmaceutical, or insurance companies; they just involve a bunch of PCs running your company's preferred operating system and applications. Therefore, you should let someone who is good at fixing PCs concentrate on that task. Your employees should focus on running the core business that your company is known for, not scanning for viruses or replacing dead mice all day (the computer kind, not the whiskered, cheese-eating type; that job, you should outsource to an exterminator).

Knowing what outsourcing involves

Outsourcing your storage concerns turns design, component selection, implementation, and ongoing operation and maintenance over to a third party. Not that you don't have any say in these areas, but usually an established outsourcing company already has a consistent, battle-hardened way of providing these services with all the bugs already worked out of the system. Such a company also probably has a switch vendor picked, a storage array vendor selected, and other components chosen and in place ahead of time. Most vendors already have a SAN-based backup solution and offer disaster recovery to a remote location, so you just plug your storage network (which is very simplified compared with a regular one) into the vendor's and use the disk space over a high-speed link.

This complete outsourcing is both good and bad. Because you're paying someone else to do all this work for you, you don't have to get involved with design, setup, and management. The flip side is that because you give up control, you may be paying for inferior design, implementation, and operation. You can always yell later, but it's best not to have matters come to that

point. The best way to protect yourself is to understand how the outsource company supports your SAN. Take a tour of its facilities and check it out.



Get references from other customers. As with any other transaction of this nature, see whether other clients are as satisfied as you intend to be. You don't pick the first plumber that you find in the phone book; you usually ask friends and colleagues about who does good work. The same goes for trusting your data to someone else.

Working with a Storage Service Provider (SSP)

A *storage service provider* (SSP) provides external services for something that a company typically does itself. SSPs can provide cost savings (equipment, training, personnel, maintenance), time, and expertise within the customers' business.

The day-to-day management can be done by your staff, using tools provided by the SSP, or you can place a phone call to have the SSP handle it for you. You don't have to lift a finger besides maybe having to plug in a host bus adapter (HBA) card into your server. Heck, an SSP might even coordinate that for you as well, along with your server vendor or even someone to whom you outsource your server support. The possibilities are endless.



The range of support that you get depends on what the SSP offers and how much control you intend to give the outsourcer over your storage needs and server infrastructure.

In terms of hardware, an SSP will house all its storage arrays in a central location. Some storage arrays are more powerful than others; therefore, they have a different cost associated with renting the space on them for your applications. The faster and more reliable arrays are more expensive to buy, so they are more expensive to rent as well.

The site will also have a SAN in place, as well as some telecommunication equipment that links its SAN with yours over a high-speed link. This link attaches to your company's site where the servers are located. The SSP link plugs into your local SAN switches, and then your servers connect to this mini-SAN. This setup is an extension of the SSP's SAN to your server's location except that the storage is located a few miles away.

Figure BC-1 shows a typical SSP's infrastructure.

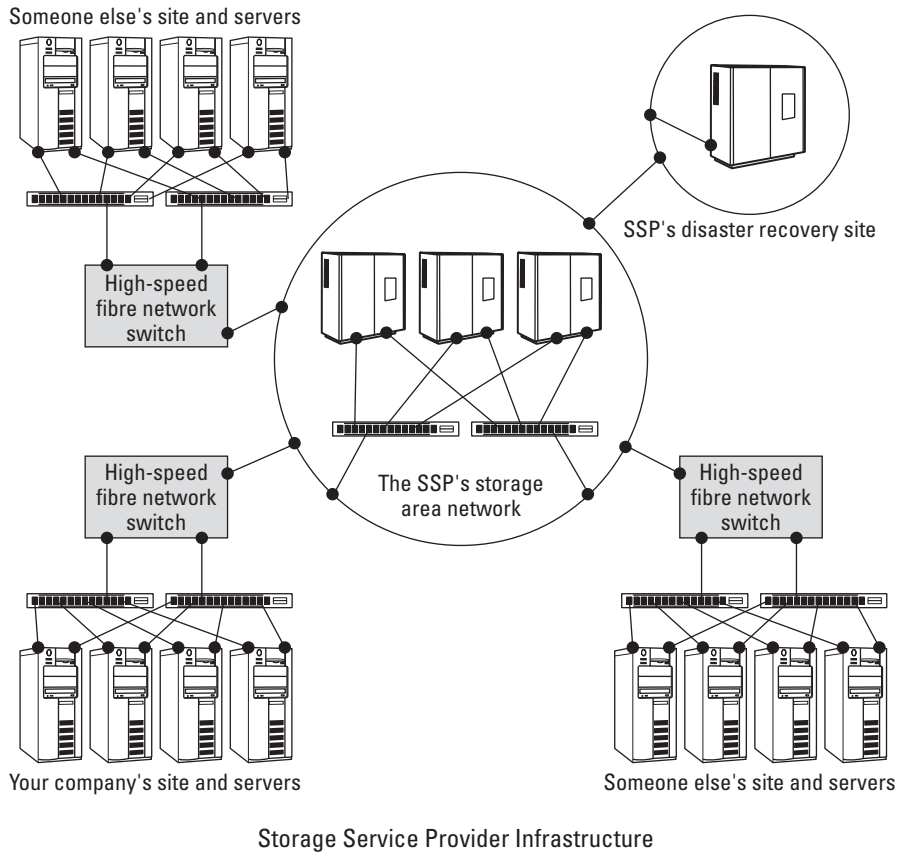


Figure BC-1:
A typical
SSP infra-
structure.

As you see in Figure BC-1, several customers are tapping into the centralized network that the SSP uses to get data to and from its customers' sites. In addition, the SSP has a disaster recovery site of its own to protect customers' data from problems at the SSP.

Getting what you pay for

Typically, SSPs charge by the month for using their storage. For that fee, you get not only storage, but also support and a guarantee of performance for that storage. Ensure that you get what you pay for by making a Service Level Agreement (SLA) with your SSP, covering what your business requires. (For more on SLAs, read Chapter 11.)

Performance

The performance of a SAN from your company's building to the SSP's site usually won't be as good as if you had the storage locally. Most SAN applications don't require 100 percent of the available bandwidth all the time, either. But what if you have an application that does? This situation is where benchmarking your application and putting its needs into the SLA is important.

Because users will be accessing your applications, you need to make sure that they're not upset with the response time caused by accessing the data from a distance. Putting acceptable response times in your SLA will force the SSP to provide a reasonable solution for your application needs. The farther your SSP is from your application servers, the more delay occurs in the communication links and, therefore, in the response time of the applications. Try to pick an SSP that is close to your location — within 50 miles.

Backup

Because your data is over at the SSP's facility, it makes sense to back it up there. But because the SSP hosts many companies besides yours, how do you know whether it's treating your backup with the care that your business demands? Your SLA should clearly state when and what should be backed up, as well as how often. You also want to specify how long your data is kept and what time is needed to restore a file after you request it.

The SSP's data center may be hosting thousands of terabytes (TB), and your data is just awash in an ocean of bits. You're paying big bucks to have your data available and protected, though, so don't skimp on this section of the SLA.



Randomly request file restores at least monthly, even when restores aren't necessary, to test the SSP's operation — and to confirm to yourself and your management that you made a good choice with this SSP.

Disaster recovery

Does your SSP have a good disaster recovery (DR) plan? How does the SSP intend to get your business back up and running if an outage destroys your SSP's data center? Remember that the SSP services customers besides you, and those customers have the same concerns. Have you reviewed the SSP's DR plan? Does it look reasonable? What does your SLA say about disasters — yours *or* the SSP's? Because you're entrusting the company to protect your data, DR is one of the most critical parts of the SLA to review with your storage provider. *Your* company could go under if the SSP has trouble recovering from a disaster or internal failure. (See Chapter 6 for more information about disaster recovery.)

Storage management

When you let the SSP handle the storage management or allocation of storage from its SAN to your servers, always anticipate a lag in response to requests. Expect a string of phone calls, an online form or some paperwork to fill out, or a meeting that needs to take place before your server sees that extra 10GB of space. For some customers, that situation is fine; they won't mind the wait, or they appreciate the provider's methodical process of checking for any issues or errors. Some industries can't tolerate such lags, however; they need their disk *now*.

The SLA should thoroughly explain the process and the turnaround time for a new request. Any request not serviced in the specified period means you can start yelling, but until then, you must sit and wait for the SSP to follow its internal procedures to grant you space.

Data security

Because an SSP houses not only your data, but also the data from many other companies, you want to make sure that others can't see your proprietary information (and they don't want you to see theirs, either). To guarantee that the documents containing the details on your company's new product don't accidentally show up on one of your competitor's servers, your SSP has to have a policy in place that defines how it secures your data from everyone else's.

Your SSP should have a set-in-stone policy on how it allocates storage to a customer's servers, directly addressing how it intends to keep would-be hackers from grabbing disk resources that aren't theirs. This book outlines the Logical Unit Number (LUN) security and zoning techniques (see Chapter 7) used to secure a specific LUN to a specific server's HBA on the SAN. These actions should be outlined in the SSP's policies on data protection. If they aren't, the SSP needs to provide you a clear explanation of how it intends to secure your data from unauthorized access. Some providers offer a form of certification ensuring that no servers except the ones you explicitly define can access your data.

Along with these security guarantees, any changes to the configuration requested by you or someone in your company should have a clear verification process to ensure that the right people are requesting the change and that the change is an appropriate one to make. Requests such as making changes in the middle of the day or reassigning an already assigned LUN to another server are the kinds that commonly lead to problems. The SSP should follow the rules that you define for your organization to keep both your own people and the SSP from violating data-integrity concerns.



Testing the SSP's security procedures is a good idea. If you set a policy that no changes are to be made during business hours, for example, make a request to have something changed during business hours. See what the provider does. Does it compare your requests with the policies and deny the change, or does it just go ahead and make the change?

Compensation for outages

When an SLA is breached, keep good documentation on what happened, when it happened, and how long the problem lasted. Just as when you're complaining about a home cable-television service outage, tell the SSP that a server lost connection or that a restore took too long to come back, and you should get some money back for the trouble. An SLA is a legal document that, if breached, can mandate that you receive monetary compensation for your troubles. All these financial penalties should be outlined in the SLA itself or in the contract you sign with the SSP.

Considering Alternatives to Outsourcing

Besides giving your storage infrastructure to an external company, two popular options are storage consulting and partnering with your storage component vendors to build your SAN. In the following sections, I discuss these options.

Storage consultants

Bringing in consultants who are experts in designing and building SANs is a middle ground between doing it yourself and outsourcing the whole thing. Instead of putting your storage off-site at an SSP site, you keep everything yourself. The people who implement the solution, however, aren't part of your existing staff.



Look to the consultants as been-there-done-that resources you can learn from. Your staff should work closely with them and allow as much experience to rub off as possible, because consultants won't always be around to assist. (Just don't rub too hard; you could cause a rash.)

Consultants can step into the process at any point, but I advise getting them involved as early as possible. They'll understand the SAN implementation better and offer more insight if they can make suggestions early, before bad ideas become the foundation of the project.

This book isn't titled *Selecting Consulting Firms For Dummies*, so I won't get into picking who should help with your SAN. But I can say that references are the best way to gauge whether a specific firm or consultant can provide the level of quality that you expect.

First ask each consultant you interview for the requirements of a previous project and the final design implemented; then ask how the design covered the requirements. Make sure that you also throw in a few "Was this the cheap-

est way to do this?” questions. Consultants are paid very well for their expertise, so don't let them skirt easy questions that they should be able to answer.

When you define the work that consultants will be doing, set some milestones about what you expect to be completed and when. The basic milestones of a SAN implementation using consultants from start to finish are

- ✓ Requirements gathering
- ✓ Design review (matching requirements to the proposed design)
- ✓ Hardware procurement
- ✓ Implementation
- ✓ Migration of applications
- ✓ Verification of migrated data
- ✓ Knowledge transfer
- ✓ Transition to local resources

Each of the preceding milestones shouldn't look new. These steps follow the beginning life cycle of any large project: understanding what you need, drawing it out, buying it, putting it together, showing management that it works, and then taking it over internally from the consultants who built it.

The consultants take your list of requirements and then run with the whole project. They collect tons of information on how you do things now and how you may want to streamline or expand your current methods of storage.

After you review what the consultants find, they put together a solution for you to critique and approve. This process may be repetitive, but ideally, not too many iterations go by before you're satisfied. (Ahem . . . consultants *are* getting paid by the hour, so be careful that they're offering their best ideas up front.)

When you feel content that a proposal will accommodate your needs and your budget, you give the consultants the okay to purchase the hardware to begin building the SAN. They may even do all the setup themselves. If they subcontract that work out to a storage vendor, they'll manage the vendor for you while your staff concentrates on business.

After the hardware is purchased and installed, the consultants should begin getting your staff involved with how the system works, how it's set up, and how to manage it. Remember that the consultants won't be around all the time; sooner or later, you'll be on your own with the SAN. Your staff needs to take the time to transfer knowledge from the consultants so that they can step right in when it's time to take over from the consultants.

If you want something done right . . .

Do it yourself — at least part of it. No hard-and-fast rule says that a SAN must be conceived, built, and maintained by either you or an external entity. You can always share the responsibilities and tasks by *partnering*. Your IT organization and the vendor(s) team up to achieve the common goal of building a usable SAN infrastructure.

This model is the most common one used for implementing a SAN, because the work involved is spread across more people, each one focusing on what he or she does best. Using this virtual team method (described in more detail in the next section) and working closely with your external vendors usually is the best approach to creating a SAN that your organization (and, you hope, your boss) can be proud of.



When you partner, you are in charge of the project. That's good and bad: good because the implementation is under your control; bad because it's up to you to make sure that things are moving along smoothly, which is work. It's better to be in charge than out of the loop completely, though. Also, because you're closer to the SAN setup than you would be with consulting or outsourcing, you get to be part of the decision-making process and feel more involved.

Partnering: The virtual team approach

Your virtual team should be comprised of key personnel from your staff who have a say in what the SAN does and engineers from each vendor who specialize in the products that they're proposing. Think of the team as an equation:

$$\text{Your IT Organization} + \text{Vendor 1} + \text{Vendor 2} + \text{Vendor 3} = \text{SAN}$$

Suppose that you have Windows NT, Solaris Unix, AIX, and Linux. You need someone who can cover your organization's platforms as an advocate for making the SAN work for that platform. That person should, at the very least, understand the operating system and the applications that currently run on it. The rest is up to the vendor to educate that person about how its products can help out.

The major benefits of partnering with your vendors are

- ✓ A more gradual learning curve for your staff
- ✓ Cleaner transitioning of SAN operation responsibilities to internal staff
- ✓ Better understanding of the SAN versus a totally outsourced solution

- ✓ Greater cost efficiency than consulting provides
- ✓ More chances to fine-tune the solution based on ongoing lessons learned

The only downside to partnering is the investment of time, because your staff works directly with the SAN vendors the whole time. Some items can be left to vendor personnel (they come in, install hardware, and plug things in), but the best time to learn is during this side-by-side, techie-to-techie time.



Consulting doesn't give you this level of understanding; consultants tell you what you need to know and usually not much else.

One of the nice things about partnering is that you feel as though you're in touch with the project, which makes for a lot of enthusiasm among your staff about being part of something new. The best thing is that your staff members don't have to do all the work; they're learning on their own, taking on the SAN gradually without even realizing it. Consider the setup free training as well. Your staff members aren't being asked to understand everything tomorrow, as they would if the whole project were being done internally.

Deciding Whether to Outsource

The decision to manage the SAN internally or to sign up an external vendor isn't easy. Because so many variables play into making the decision, you should look at what you miss by going in one direction versus the other.

The downside of outsourcing

Before you skip to the section "The upside of outsourcing," understand that *downside* doesn't mean the worst. You must weigh all the good and bad things that can happen and then rank what's most important to you, your organization, and your company as each item relates to your SAN implementation.



There are no right answers — only upsides and downsides to be aware of while you consider outsourcing.

Cookie-Cutter Solutions, Inc.

One common situation arises when an external vendor comes in and implements your SAN: The vendor may be so used to "dropping a box" into a data center and calling it a SAN that it doesn't address any of *your* problems with the solution. I call this situation the *cookie-cutter process*. In the cookie-cutter process, the vendor just takes the same plan it used last week for company XYZ (and the

week before that and the *month* before that) and uses it as your *custom* solution. The solution looks like every other cookie the vendor bakes — yet you'll be charged for a radical, customized solution specifically tailored to your needs.

The best way to fight this possibility is to ask to see some references and some previously implemented designs. Have the vendor point out the specific reasons why it did what it did. If the vendor can't explain, it doesn't know what it's doing . . . in which case you should move on to a vendor that *does* know.



Reviewing everything that vendors are implementing and having them link their solutions back to your initial list of requirements can help keep vendors honest.



Keep an eye out for extras that you didn't ask for. These items raise the price and probably don't help you solve the problem you're looking to solve. (See "Telling the vendor what you require," later in this chapter, for more information on conveying your needs to the outsourcer.)

"Acme SAN Outsourcers, please hold . . ."

One reason why you outsource your SAN is because your own people don't have the time to put it together. The company that you're paying to take care of it had *better* have the time to talk to you. Even if you have a contract promising prompt service, as everyone knows, that promise doesn't always fly when you drop a dime at 2 a.m. to call about a problem.

Check whether the outsourcing firm has the requisite staff and expertise to handle your service levels for your internal customers. Then check its references again to understand what the firm does to train its people on all aspects of SAN design, operation, and so on. Think of this process as interviewing everyone in the company when you're deciding which vendor to hire to work on your SAN.



You're paying vendors to provide you something that works. If it sounds as though you can't trust a vendor to help you, find one that can before you get yourself into a contract that you can't get out of.

The upside of outsourcing

Outsourcing a SAN project gives you many benefits. Among them: You don't have to do all the work, and you get focused experts with new ideas looking at your specific situation. This fresh, objective approach is a very healthy way to see your environment from a new angle, which may uncover even more issues than you already know about.

Throwing the whole project over the fence to an external group, however, is like giving a total stranger your checkbook and saying, “Okay, now go redecorate my house.” You should provide clear requirements, guidance, and feedback so that you end up with something that fits your needs. If the requirements are clear and logical, the solution that the vendor proposes should be clear and logical too. A Request for Proposal (RFP), which I discuss later in this chapter, is the key to defining those needs.

Screening Vendors

The process of finding the right vendors to source your SAN from is an interesting process. You have to be able to determine what your business wants to accomplish, put it down on paper, and then decide which vendors are meeting those objectives and which ones are trying to snow you.

This cat-and-mouse game starts with the RFP, or Request for Proposal, document. Your vendors hope it ends with a sale, and you hope for a SAN that meets your needs. Keep that last sentence in mind, and you won’t go wrong.

Writing a Request for Proposal document

Many vendors complain that their failed attempts at a project are the client’s fault — that expectations weren’t realistic or weren’t defined properly and clearly. Assumptions were made, and you know how assumptions turn out. The best way to lay it all on the line for your external vendors and consultants is to create a document that dots the i’s and crosses the t’s on your SAN solution.

This *Request for Proposal (RFP)* document is a list of demands that you make for a solution that your company requires. The RFP lists your requirements for a project or business need; vendors then use that document to develop a solution featuring the products and services that they sell.

A vendor’s reply to an RFP can range from “Yeah, we can help you” to a weeklong conference at its corporate headquarters (a free trip known as a *boondoggle*) to describe the proposed solution in detail with presentations, handouts, dinners, drinks, free shirts, golf games, and so on. You’d be surprised what some vendors will do to earn your business. Just don’t select a solution based on the boondoggle. Stop daydreaming about playing Pebble Beach, and make sure that the solution fits your needs. Remember — those ethics officers at Corporate HQ are watching you.

Listing your demands

Like the kid in the toy department who holds his breath until he gets the toy he wants, you should exercise your power when working with vendors — on a much more professional level, of course. You do have the power to get what you want, provided that you clearly explain what you expect to get.

Stating the SAN's requirements to your internal organization and your external vendors, whether those vendors are consultants or outsourcing firms, is critical when you paint the picture of what you want to accomplish. Everything that you hope the SAN will provide is built on this foundation of needs.

Describing your environment

First, you need to describe what your company is, what it does, and what it needs in terms of business functionality. Example: "We are a financial services firm, handling billions of dollars a day for the top 50 banking institutions in the world." A statement like this should immediately pique the interest of those reading it; it makes them realize that your company is a serious player demanding a solution that works $24 \times 7 \times 365$ — no excuses accepted.

Next, define what your current computing environment looks like. List each of your locations, the types of servers residing there, the operating system versions used, the type of storage used, and the backup tactics that you employ (a tape drive per server or a shared library?).

Telling the vendor what you require

Now create your wish list. Make it good but not unrealistic. State any new visions that senior management has stated to your IT organization, such as disaster recovery plans, zero-downtime backup solutions, centralized management of all storage, multimedia services, or video on demand. This wish list is what the vendors or consultants will try to accommodate with their SAN solutions.

Your wish list is a 30,000-foot overview, not techie talk. That conversation will come later, after you're selected a few vendors that sound as though they understand your vision and can walk the walk.

Setting limits on the solution's scope

The most common failure in an RFP is neglecting to define when enough is enough. A vendor can reply with a 100 percent viable solution — but it costs ten times as much as you're willing to spend. As long as you're realistic in your requirements, a solution is out there. Just make sure that you put a

dollar cap on it so that you don't price a vendor out of a solution. Vendors can always make compromises within your budget, so set the expected cost up front to keep from flipping your wig when you get the quote. As you do when buying a car, don't go in there holding out your checkbook. Be conservative about how much you expect to pay — and stick to your guns. Vendors want your business; they'll figure out how to stay within your budget.

Time is another important definition in the scope of the project, especially for consultants and professional-services engagements, which are charged on a time and materials basis. Do you expect to have the project done (to a certain point) in three months? Six months? A year? State that in your RFP so that the quote will reflect the people hours that have to be factored into the project plan. If your company has multiple sites, geographically dispersed, some travel time and expense may also have to be factored in.

Also, specify when the project must go from being run by the vendor to being internally run. If you're proposing a phased approach to the project, make sure to state that fact as well.

Make sure that internal projects that relate to the SAN have well-established timeframes and expectations. Things need to line up; otherwise, you'll be caught with a business rollout without any storage to connect to it. You may need 50TB of storage for 200 hosts, for example, but want to start with 2TB and five servers on Day 1. The costs will differ depending on how the project expands over time, especially if leasing rates are involved, with the possibility of swapping out existing computing infrastructure for new technology. Vendors can be quite creative when they know that they may reap future business with a customer, so make sure to note that possibility up front so that the vendors can crunch numbers and make their solutions look very attractive.

Deciphering the replies

Reading an RFP is an art. You must fully understand what you asked for in the RFP in the first place and then see whether the answers match the questions.

When you have an RFP that looks good, the next round is a chalk talk to find out how the vendor can really help you in the long run. In a *chalk talk*, you invite the SAN vendor to give a more technical overview of its solution. The vendor representative usually has a presentation with diagrams or maybe gets crazy on a whiteboard, drawing out some ideas. Then you can discuss the proposed solution. This dialogue is essential so that you can narrow down and weed out any misconceptions or confusion in the proposal. (**Bonus:** You may be able to learn a lot for free by asking questions.) You'll also find out more about your own environment, because vendors will ask in-depth questions about it, invoking a philosophical discussion about why you

do what you do with your current gear. The vendor rep will fill you in on who else she's seen in your predicament and how she addressed those issues. It can be quite eye-opening to realize that your firm uses baling wire and bubblegum when your competition uses duct tape and zip ties to solve the same problems. But I digress.



Make sure that the proposal describes the vendor's plan to implement it. Does the plan have a timeline, and is that timeline the same as your expectation? Can the plan be done more quickly for less money? You want to see where this schedule aligns with yours in terms of the intended dates of purchase, delivery, implementation, and turnover.

Narrowing down the choices

After you craft your RFP, seek vendor bids, and choose the likely winner, here's one final bone to chew on: Can this vendor deliver what you want? Before you sign on the proverbial dotted line, make sure that you're comfortable with the answers to these questions:

✔ **Is the vendor financially stable?**

Translate that question as "Will the vendor be around for the life of your SAN?"

✔ **Have you checked with its closest competitor?**

You can make the best deal by having your first- and second-choice vendors compete for the same business. One of them has to break and pull out of the deal at some point, so you could make out with a great deal on a SAN implementation that would have cost twice as much if you hadn't asked the other guy to show his face.



Holding a reverse auction

If you're comfortable with any of the solutions proposed your final vendor choices, you can allow them to make the final decision on price for you. You accomplish this task with a reverse auction. In a *reverse auction*, the vendors submit their lowest bids to your company as "best and final" prices. This way, you accept that all the vendors' solutions meet your technological requirements; you're just looking for the cheapest overall price. Think of a reverse auction as a regular auction in which the *lowest* price wins. Doing the deal this way keeps any favoritism out of the picture. (Boondoggle? What boondoggle?)

Support makes the sale

Here's a real-life story from an unnamed vendor. A vendor goes into a bar . . . no, that's not the one.

A vendor goes on a sales call to a large customer. The salesperson and a systems engineer are in the conference room with several technical people (plus a high-level CEO type), and they begin the song and dance about their product. When they start talking about their great support structure and claim that they get the experts on the phone with the customer within 15 minutes (no matter what!), the CEO chuckles and says that this claim is nonsense. "Even your competition doesn't make wild claims like that, and they're twice as big as you guys," the CEO states. He excuses himself to talk to someone out in the hall and comes back near the end of the presentation.

Suddenly the systems engineer's cell phone rings, and he excuses himself from the room to take the call. A minute later, the CEO's cell phone rings. The caller is the SE from the presentation, calling from a phone in the hallway.

When the CEO left the room, he did so to call the vendor's help desk. What he said was this: "Hi. I don't have any site ID or customer number or anything; I just got your product, and I'm having some trouble. I need someone who can help me out. Here's my cell-phone number. Goodbye." The vendor's help desk paged an engineer (the systems engineer who was in the meeting) and had him return the call — all within five minutes. The CEO was so impressed that the company ended up buying the product. True story. No, really!

Picking a Winner

Lots of ideas can look good on paper, and some sound better when they're delivered by a skilled wordsmith, but don't get snookered by pretty graphics and glib rhetoric. Before you commit to a vendor, remember that anyone can promise you the moon but give you a plate of green cheese. After all, vendors are salespeople who want to sell you something — and in some cases, something you don't need. Be careful to understand the offer and match it to what you *do* need.

On the flip side, however, perhaps you've found a gem of a vendor that's looking out for your future needs. You have to weigh the need and the desire to get the right solution. Some final points should make you confident you're picking the right vendor:

✓ **Make sure that the solution meets your needs.**

Ask questions. It's your nickel, so make sure that things make sense. If you don't understand the answer, ask the question again. There are no stupid questions. It's the vendors' job to sell their wares, so make them earn your business. (Boy, are my friends in sales gonna kill me when they read this paragraph.)





✔ **Use one of your lifelines before you need to.**

Test your support infrastructure. Before you buy anything, call the vendor at 3 a.m. to see what happens. You should know what the support structure is before you decide to depend on it for your problems. Testing it is your due diligence.

✔ **See how flexible the vendor is about changes in technology.**

SANs may start small, but they grow at an unknown rate. You need to know how flexible your vendors are in adapting to these changes and scaling the solution accordingly. Ensure that they change directions and offer other solutions that still interoperate.

Also verify how quickly the vendor supports new technology. If you have more than one vendor, do the vendors cross-certify one another's products when those products come out? Cross-certification shows tight partnering, which helps you when you need to get something fixed. The less finger-pointing that goes on, the better for your SAN (and for your personal sanity).

