ROUNDSTONE SOLUTIONS

UNCOMMON COMMON SENSE
ABOUT MODERN IT INFRASTRUCTURES

June 4, 2020

*This is the second of three Posts. The first Post (**HOW DID WE GET HERE?**) discussed how we got to where we are today, sharing a little bit about the history of IT and culminating with the point that IT is all about the applications.*

We're going to move things a little further ahead with this post and discuss what it is that you're trying to accomplish with your own IT organization. The short answer is that IT is about helping the business be more successful, however your particular organization defines success.

POST #2: WHERE ARE YOU TRYING TO GET TO AND WHY?

If your organization is like most, you have an IT infrastructure that has been put together over many years. Some of your infrastructure is older, and some of it is newer.

Your IT team is probably split between those who know how to operate the older infrastructure and those who are more comfortable with the newer parts of the infrastructure. This is not a commentary on the age of your team, but rather the familiarity and comfort each individual has.

You probably have products from many different manufacturers. For this discussion, let's just talk about the data center (like servers, storage, networking, etc.) and not end point devices (like PCs, printers, and the like).

For servers, you're running Dell, HPE, IBM, Sun/Oracle, Cisco, and a few others. For storage, you're running Dell/EMC, NetApp, HPE, HDS, and a few others. Networking is most likely Cisco, with some running Juniper, Extreme, HPE, and others.

As we look at this list of vendors, our observation is that it's a lot of different vendors…vendors who have their own ways of doing things, their own software/firmware, their own product lifecycles, purchase terms, etc. Because you've bought from so many different vendors, it's your job to keep them all working together properly. Which is not easy.

On top of the hardware vendors, you also have software vendors, and of course, various resellers that you work with.

All of these different vendors have their own goals and objectives, and we can share with you their big one…to get you to continue to buy more and more of their stuff.

NONE OF YOUR EXISTING VENDORS HAS AN INCENTIVE TO GET YOU TO SPEND LESS.

Let that sink in for a moment. None of your current business partners is interested in seeing you spend less, even if it's better for you and your organization. Hey, we're just pointing out the obvious here. But darned if it isn't true.

The reason we pointed this out is that technology already exists for your on-premises data center to be far more cost effective than it probably is today. And we're going to talk about it.

We'll start by pointing out that the concepts of 3-Tier IT infrastructure are at least 25 years old. If you've been doing this long enough, you'll recall shared storage, storage area networks, and lots of servers. Look into your data center today and you'll see the same thing you would have seen 25 years ago.

Here's something to consider; last weekend SpaceX launched two astronauts into outer space, and they were able to safely make it to the International Space Station. Here's a comparison of the interiors of the space capsules from the Apollo spacecraft (1969), the Space Shuttle (1995), and the Dragon Spacecraft (2020).

Apollo Capsule (1969) **Space Shuttle (1995)** **SpaceX Dragon (2020)**

Look at the difference between the three capsules. See what technology has done? Look at how much cleaner the SpaceX Dragon looks compared to the Space Shuttle.

Realize the Space Shuttle's design is from around the same time as your 3-Tier IT infrastructure. SpaceX didn't even exist until 7 years after the picture of the Space Shuttle.

Well, you can have a SpaceX-like design in your data center. All you have to do is be open to advances in technology. By the way, most of the newest technology is not coming from your existing vendors.

WHAT DOES YOUR ORGANIZATION NEED YOU TO DO?

As we've stated before, you have an IT infrastructure because of what it can do for your organization's business. Your business needs IT for one or more of the following reasons:

- To help it be more competitive and give it an edge over its competitors
- To allow it to develop newer, better products that customers will want
- To cut costs of doing business, developing new products, etc.

When an organization asks this of IT, it specifies the results expected, and usually doesn't specify how it's to be done. That's what IT management is for; to get the job done. Of course, from time to time, upper management will spout the latest buzzwords or concepts they've read about in Forbes, Fortune, or some airline magazine. You're left to figure that part out.

About 10 years ago, we started hearing about "The Cloud". You couldn't pick up an IT periodical or visit a website without something being written about The Cloud being the Holy Grail. Many of us didn't even understand what The Cloud meant until someone pointed out it was just another phrase for "data center". The Cloud usually meant someone else's data center. We now know that your own data center is considered your Private Cloud. AWS, Azure, and GCP are examples of someone else's data center, and are the Public Cloud.

APPLICATIONS ARE THE KEY

We've spent most of the time talking about the IT infrastructure, which we usually think of as hardware and software, typically systems software. But the key to all of this is the application software. Applications (or Apps as you refer to them on your Smartphone) are what matter, because they're what does the work your organization needs it to do.

If you look at the breakdown of where your IT expense goes, it's probably heavily weighted towards the hardware infrastructure, support costs for the hardware, and people. Applications are usually way down the list. Either

applications are very inexpensive, or people spend more than they should on infrastructure. We think it's the latter.

It's generally accepted that 65-75% of IT spend is spent on maintaining the existing environment, and only 25-35% on innovation/new applications. It's hard to imagine a company being able to innovate when so much money is going to maintain the old. Looking at SpaceX, if they had to spend 65-75% of their money on maintaining old infrastructure they'd still be grounded.

Let's agree that to move forward faster than the competition, it might be useful to be able to spend more money on innovation than keeping the lights on. How do you get there?

You begin by deciding to do something different than you're currently doing. By simply deciding that you're not going to be held hostage by the "old way" you're taking the first step towards freeing up money for innovation, and with it, a more successful company.