Use What You Have To Get What You Want:

How to Modernize your IT Environment

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Doing more with less is a standard IT saying. Budgets are tight – yet there are new technologies available that can significantly improve how a company does business. However, a tight budget doesn't mean these technologies are out of reach. With the right game plan, an IT department can transform their aging infrastructure and a narrow budget into a cutting-edge department at the forefront of business demands.

Gartner's IT spending forecast is revised each quarter, and the 4Q '15 and 1Q '16 forecasts have shown there is little to no growth in IT budgets. In its latest estimates, Gartner shows a reduction in IT spend of 6% in 2015 and projected a worldwide decrease in IT spend by another .5% in 2016. Economic strains and geopolitical conditions mean tightened budgets across the board.

Our experts believe that less IT spend means prioritizing new technology implementations is essential. New technologies like hyperconverged infrastructure and next-generation firewalls can help your business implement paradigm-changing solutions like big data and the Internet of Things (IoT) – but it requires creative and strategic IT leadership.

"Modern businesses need to be more selective about investing in new IT infrastructure. If you are spending less, you need to ensure your new purchases leverage and elevate your existing technologies," said Accudata Systems Practice Director Vid Sista.

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Determine Your Environment's Future

Accudata experts defined three key technology areas that businesses are looking to expand into. They include:

1. Hyperconverged infrastructure,

2. Cloud utilization technologies, and

3. Modern security technologies,

Over the next five years, companies will invest large portions of their IT budget in these three areas.

The Convergence Is Now

Hyperconverged infrastructure is a virtual computing infrastructure solution that combines data center services into one appliance. It allows you to unite data center infrastructure below the hypervisor. That means your storage, servers, and in some cases networking can be consolidated. Capital expenditures can also be reduced – only having to buy and maintain one combined solution allowing for cost savings instead of continuing to support multiple vendor solutions.

There are several reasons to consider using hyperconverged architecture. One of the key benefits comes from the ability to intelligently virtualize servers. Using physical appliance nodes to virtualize everything from the hypervisor level on down essentially multiplies the amount of tasks you can perform at once. Hyperconverged solutions allow IT departments to see significant gains in operational efficiency and automation. The unique design of hyperconverged infrastructure solutions allows a company to easily scale when necessary. As business requirements grow, companies can easily add units for resource expansion.

Harness the Cloud

While hyperconverged infrastructure provides a leaner, smarter corporate network, cloud computing offers a company power and visibility. Many businesses are already harnessing the cloud in some way, but there is still so much more the cloud can offer. Implementing a Virtual Desktop Infrastructure (VDI) solution can ensure users have powerful applications, even on old hardware. Cloud providers like Azure and Amazon help companies implement data analytics solutions without having to buy physical hardware or data center space. Companies can also move their communication and collaboration tools to the cloud, providing greater flexibility and accessibility. A reduction in capital expenditures can also be expected when utilizing a cloud environment – since there is no hardware to purchase, companies are only renting resources, not purchasing them. A more thorough breakdown of cloud computing can be found here.

Moving applications to the cloud is a great way to provide users the experience they need without investing in the hardware to do so. Cloud solutions are simply more equipped to handle large amounts of data than traditional networks. It also allows for cost-effective test-dev environments, giving developers the freedom they need to experiment with new ideas – without taking over large parts of the corporate network.

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Modern Security Technologies

Securing your Cloud Environment

While hyperconverged infrastructure and cloud computing are exciting technologies, they are nothing but a liability without the proper security controls. Implementing new technologies requires a new perspective on security strategies as well. For instance, using cloud infrastructure means sending large amounts of data from your network to a cloud provider. Categorizing data is paramount. Once data is categorized, it is much easier to manage – and easier to secure as well. A company's most critical data requires the same amount of protection in the cloud as it does in an on-premise environment. Organizations must ensure data is encrypted at rest and in transit, and that encryption keys are stored in the most secure manner possible. Without encryption keys, stolen data is useless.

Implementing a Security Assertion Markup Language (SAML) solution to give your users secure access to cloud applications is another step in providing robust cloud security. Once the infrastructure layer is secure, there are Security as a Service (SECaaS) offerings to consider as well. Cloud security is complex, and more information can be found here.

The Next Generation of Threat Prevention

Traditional firewalls play an integral role in network security. However, these firewalls are simply unable to stay effective in today's changing IT landscape. The amount of traffic going in and out of corporate networks is increasing, and that means large amounts of traffic passes through firewalls. A Next-Generation Firewall (NGFW) is essential to keep a company's assets secure. NGFWs have the ability to integrate information from outside the firewall into its security policy – including directory-based policy, white lists, and black lists.

NGFWs also provide signature-based Intrusion Prevention System (IPS) capabilities, as well as application awareness. Security teams have more granular control with NGFWs than with older firewalls, allowing for security policies that go above and beyond what was previously possible. SSL decryption is another key feature to consider. Traditional firewalls do not have the ability to inspect SSL traffic because it is encrypted, leaving networks vulnerable. Attackers are exploiting this vulnerability, and businesses are suffering. To combat this SSL attack vector, NGFWs can inspect SSL transmissions, allowing for a more advanced security posture than ever before.

Finally, NGFW solutions allow a company to consolidate disparate network security technologies. Instead of having separate firewalls, web gateways, and advanced malware detection appliances, a NGFW

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can provide all of these features in one package. IT departments will also notice a reduction in administrative overhead. Instead of managing all of those products separately, companies can build a holistic security strategy that provides better visibility, security, and network oversight.

Getting What You Want With What You Have

All of these new technologies are exciting — but they don't mean anything if you don't have the ability to implement them. With budgets tight, new adoption and implementation can seem daunting. Remember to plan with business needs in mind. The key to a successful IT strategy lies in planning and understanding all of the tools available to you. Our experts have five recommendations when developing a long-term strategy for IT success.

1. Maintain your current infrastructure. Don't let your plan get sidetracked because of a security incident or an unplanned outage. Always ensure you patch your infrastructure with the most current code releases. If necessary, paying for updated functionality will provide the ROI you need to budget for a new implementation down the road.

2. Security reviews are another way to maintain your environment. By performing periodic security assessments and leveraging a vulnerability management solution, companies can effectively strengthen their network defenses — ensuring IT departments focus on the future instead of fighting fires day-to-day.

3. Another important point to consider is assessing assets and feature sets an IT department currently owns. Companies may not be leveraging all the resources at their disposal. Whether it's a bundle that was never effectively rolled out or a new feature available in an updated version of code, there are numerous ways to revitalize your current technology. By understanding and inventorying all of a company's technology assets, you can optimize your capabilities and determine how to leverage existing assets for new technology implementations.

4. Consider building a test-dev environment with older technology. A test-dev environment allows for experimentation in a safe environment, meaning your users will be less impacted by new code or new appliances. Test-dev environments also give IT departments the opportunity to implement Proof-of-Concept (POC) technologies and help the department innovate for the future.

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5. Finally, many vendors have aggressive trade-in programs for new implementations. Accudata can show how new deployments may be more affordable than you realize. Another benefit to the trade-in model comes from the ability to consolidate your infrastructure. Companies may be able to consolidate multiple technologies at once when implementing hyperconverged infrastructure or a NGFW – which could mean the ability to trade in multiple technologies at once.

Long-Term Success Strategies

Once you know what new technologies you want to implement and you have a handle on what is in your current environment, it's time to build a long-term strategy for success. Understanding your company's use cases and your business requirements is essential. Communicating with key stakeholders allows for a business-first mentality and ensures all initiatives align with one another.

From there, look at how to solve or enhance business challenges with new technology. Partners are a key part of this long-term strategy. By utilizing IT experts like Accudata, you can build a strategy for success. You can't afford to implement technology that won't benefit the company – so be selective. Spend smarter, and work towards purchasing what integrates into existing investments when possible. Adopting the wrong technologies (or implementing them incorrectly) can inhibit growth.

There is a lot to consider when developing a long-term strategy for success, so here's a breakdown of the overall process:

- Determine how new technologies impact business units

- Decide how to integrate new technology with existing infrastructure (or how new technologies can replace existing infrastructure solutions)

- Ensure security strategies are updated to support new technologies

- Follow the five recommendations for IT success

- Engage the business and strategic partners to build a long-term strategy for success

Our experts have helped countless organizations leverage existing infrastructure and successfully build strategies for modernizing IT. We're ready to help you.