

CREATE A MODERN IT INFRASTRUCTURE

Creating or otherwise modernizing IT infrastructure is essential for today's businesses to succeed. Of course, incorporating a modern IT infrastructure into an existing business workflow is easier said than done. What hardware is needed? And what software will be used to support it? Then there's collaboration and communication tools, cybersecurity needs, and management programs, too. To avoid confusion and frustration, the following are some factors to consider when creating IT infrastructure, along with best practices to help develop a sustainable, scalable IT solution.

HOW TO CREATE AN IT INFRASTRUCTURE

When setting up an IT infrastructure, it's important to take care of the essentials first.

This includes the following:

SOFTWARE

The right software needs to be selected to ensure the IT infrastructure and your business run smoothly. The following are a few software solutions to consider:

- Business operations, ranging from CRM and project management to ERP and more.
- Employee needs, which generally means software like Microsoft Office or Google's G-suite, to enable employees with the means necessary to perform their everyday duties.
- Operating systems, which serve as the foundation for operating hardware like servers and desktop computers.

When comparing software, it's important to think about the needs of a business and what software best streamlines the company's processes.

HARDWARE

Once the software is chosen, the right hardware is the foundation of all IT infrastructure.

Some of the things that need to be considered include:

- Computers and periphery, including desktop computers, monitors, mobile devices, and more.
- Physical storage and backup storage, including hard drives, cloud storage, etc.
- Servers and server racks (the number of physical servers needed depends on whether a company opts for virtualization).
- Backup servers or failover cluster, in case one physical or virtual server goes down (as this'll help reduce latency and downtime).

Without physical or virtual hardware, you're not going to have much of an infrastructure to start out with.



CONNECTIVITY

IT infrastructure is connected through a company network, and consists of internet access, security, firewall features, and more. When creating a new IT infrastructure, it's important that the network can connect to the Internet and support remote access to printers and other devices.

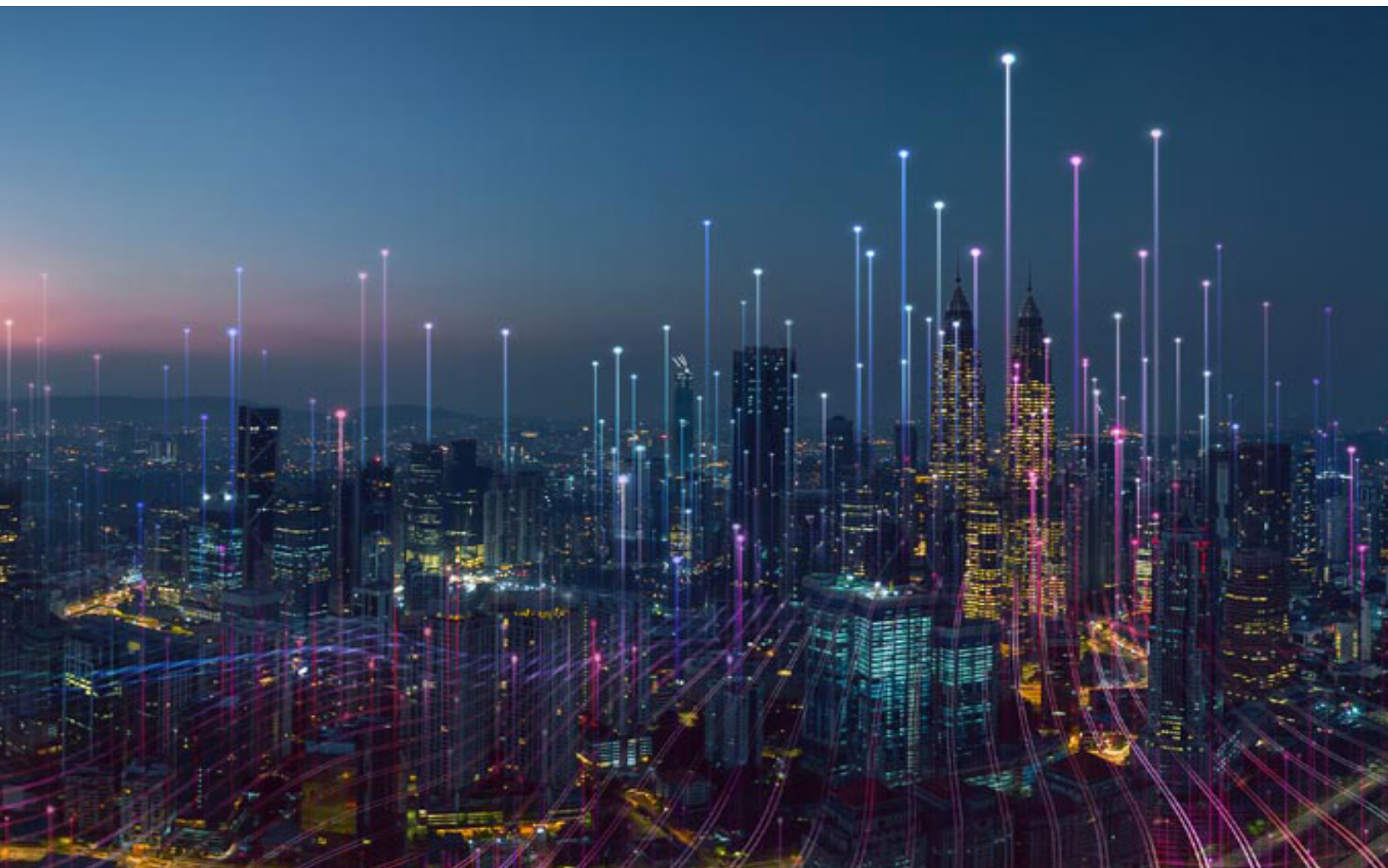
Here, it's important to consider the type of network needed: wired, wireless, or hybrid. Each has its pros and cons. Wired networks are typically faster and can support more robust needs; however, a lot of cables are needed to connect everything.

On the other hand, wireless networks utilize Wi-Fi signals, so no cables are required; however, these connections are generally slower and prone to interference. As a result, most companies opt for a hybrid model that uses both wired and wireless connections.

SECURITY

Once the network type has been chosen, it's important to secure it. This begins with setting up a firewall. While generic firewalls come with most operating systems, they should not be viewed as adequate protection. Instead, it's better to go with a more advanced firewall appliance that can protect against cyberattacks, data breaches, and more.

Thereafter, additional cybersecurity software should be built atop it, including, but not limited to, antivirus, antimalware, and more, to add additional layers of protection. The goal in doing this is to incorporate greater resiliency against cyber criminals who have become increasingly sophisticated at exploiting opportunities to steal data. This intrinsic security, if you will, is a recommended approach for all companies to help safeguard their business.



NEXT STEPS IN CREATING IT INFRASTRUCTURE

More and more companies today are creating or otherwise modernizing their IT infrastructure to get the best of breed capabilities that can support their company's needs.

When creating an IT infrastructure, there are the three key things to keep in mind:

Keep it simple | Aim for intuitiveness | Make it scalable

Successful IT managers not only take care of their company's IT needs in the present, but they also keep an eye on preparing for technological developments that are a few years down the road. Those that are in a small- or mid-sized company poised for growth – but without the capital to invest in a full IT department – would be best served to look for a partner for practical IT help when creating their IT infrastructure.

THE RIGHT PARTNER CAN PROVIDE THE GUIDANCE NEEDED TO PUT THE RIGHT IT INFRASTRUCTURE IN PLACE

Again, when setting up an IT infrastructure, it is important to take care of the essentials first. Begin with customer operations and processes, as this will determine the software and application(s) needed to run the business. From there, look at each application and identify what hardware is required. Couple this with additional variables, e.g., number of users, to ultimately determine the infrastructure needed.

The ecosystem that Dell Technologies has created includes the expertise and tools necessary for understanding these details and building the best possible solution for each company, including infrastructure software, hardware, connectivity, and security.

To help implement solutions faster – and with greater efficiency – Dell has created three solution recommendations, complete with key configurations designed to be adaptable to help support IT infrastructure set-up, no matter where a company is in the transformation process.

1 Beginning your IT infrastructure journey: Ideal for small businesses in need of common requirements like business management systems, CRM, and small ERPs.

Configuration includes PowerEdge T350 + Hypervisor (VMWare or Microsoft), N2024 1GbE PowerSwitch, Three Years of Pro Support Plus, Pro Deploy Plus.

This option offers immediate, streamlined productivity, highspeed memory, and capacity, plus powerful compute capabilities to address common business applications, as well as a new streamlined chassis. It is ideal for: Small to mid-sized businesses, Remote office/branch office, Collaboration and sharing and Real-time database management.



2 Looking to improve performance: This option is meant for small businesses that are in a second stage of IT infrastructure development, or start-ups with higher requirements like high availability, more complex ERP, and graphic demands.

Configuration includes 2x PowerEdge R450 + Hypervisor (VMWare or Microsoft), the simple, fast, and affordable PowerVault ME5 storage + N3200 Multi-Gig PowerSwitch, and three years of Pro Support Plus, Pro Deploy Plus.

This option offers the best value for organizations looking to update processing, I/O, and storage capabilities in a dense form factor. It is ideally suited for: Small IT Infrastructure, Light VM (virtual machine density) and Small Business Specific.



3 Ready for all DevOps needs: This last solution is meant for mature small businesses or companies with high IT demands, like “all-tech” start-ups, as well as those with several applications, both on-prem and in the public cloud.

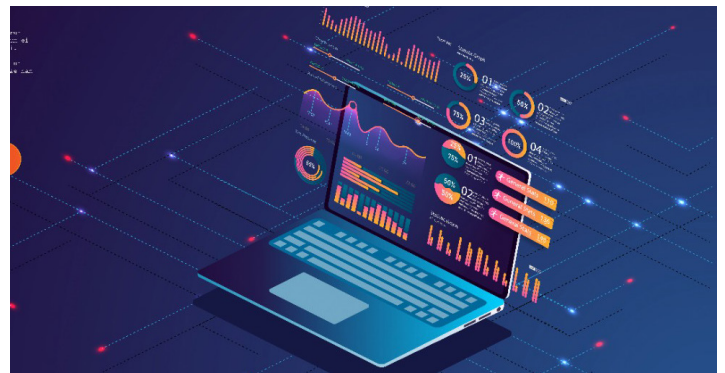
Configuration includes Two Node Hyperconverged Infrastructure Solutions (VxRail or Microsoft Azure Stack), S4112T PowerSwitch, and three years of Pro Support Plus / Pro Deploy Plus.

It is ideal for applications in: High-performance data centers and High-intensity computing environments.

What’s more, you can manage and gain insights across the full Dell Technologies data center portfolio by using Dell’s OpenManager and CloudIQ tools, too.



Finally, it is also worth pointing out Live Optics IT Infrastructure Analysis Software. With Live Optics, you can analyze and gain transparency into the performance of your infrastructure in hours, as opposed to weeks. This allows for more immediate insight into performance issues and general inefficiencies, which can then be addressed sooner rather than later, thereby improving a company’s performance considerably.



A PARTNER TO RELY ON

The partner ecosystem that Dell Technologies has built is designed to support the many nuances and complexities of IT ecosystems, including multi-vendor environments. With the power of Dell backing them up, Dell's partners have the skillset and experience to quickly resolve performance issues and truly transform any environment, laying in place a more efficient model that enables growth.

Dell Technologies provides unmatched support, with a variety of purchasing options to enable your business to leverage technology to grow while also preserving cash.

Find your local Dell Technologies partner [here](#)

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Source: [Dell Technologies](#), "Dell APEX Cloud Services: Simplify Your Multi-cloud with a consistent experience everywhere"

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