



5 reasons why your data center is everywhere



The applications of yesteryear were all in one place—generally on your desktop or on a server in a data center—but that is not the case today. Today’s applications are complex and interconnected, making the next generation of data center infrastructure crucial to their operation.

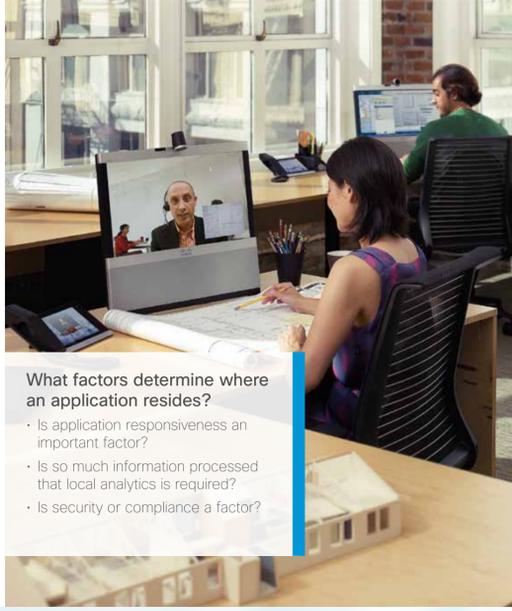
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The data center infrastructure is constantly evolving to keep up with demands for a broader set of applications and deeper intelligence and solutions.

1. Applications reside everywhere.

Data centers aren’t going anywhere, but that doesn’t mean that applications will be living there. Many applications nowadays exist in remote locations so they can be closer to the user or device but rely on an infrastructure that depends on the function the application is fulfilling.



What factors determine where an application resides?

- Is application responsiveness an important factor?
- Is so much information processed that local analytics is required?
- Is security or compliance a factor?

2. So does infrastructure.

Of course, because applications can reside everywhere, so can IT infrastructure—and it does. This decentralization provides quite a challenge for IT teams after years of infrastructure consolidation. Today’s solutions require simplification and automation of the infrastructure in the data center and wherever else the infrastructure lives.



3. The cloud

If an application isn’t living in your data center, remote locations, or mobile device, then it’s bunking in the cloud. The cloud already holds more than an exabyte of data, and it’s getting stuffed with more, which means that the next generation of applications needs to move transparently between private and public clouds.

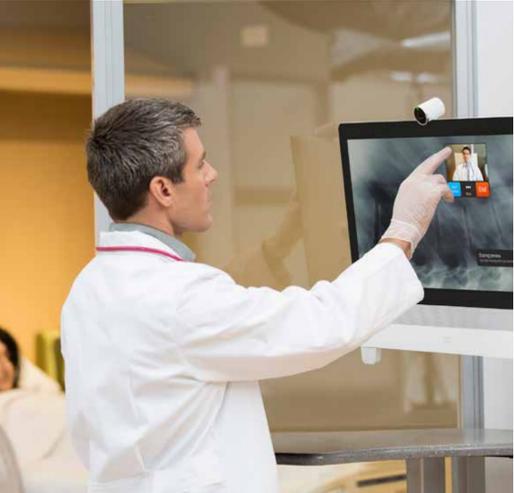


“There were 5 Exabytes of information created between the dawn of civilization through 2003, but that much information is now created every 2 days.”

– Eric Schmidt, executive chairman, Google

4. Too much data

Applications are essentially data generators. But there’s a problem: They generate too much. This isn’t a bad problem to have (like being too smart), but it does mean that you need to find a new way to store all the data so it can be analyzed and turned into actionable insights.



5. Big data analytics

Depending on what your business needs to accomplish—and the applications it needs to do so—IT can use big data and analytics to mine databases and social media information that can inform your decisions into the future.

“Big data is at the foundation of all the megatrends that are happening today, from social to mobile to cloud to gaming.”

– Chris Lynch, former CEO, Vertica Systems



5 tips to ensure that big data has a big impact on your organization



Big data is changing the way that the world does business, from reactive to predictive. Analytics can transform the way that almost every department in your organization operates, but most companies are barely scratching the surface. Here are five tips to get more actionable insights from your data.

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“Hiding within those mounds of data is knowledge that could change the life of a patient, or change the world.”
— Atul Butte, division chief and professor, Stanford School of Medicine



1. Deploy a massively scalable big data platform.

The more data you process, the higher-quality insight you will glean. Consequently, expect your data to grow exponentially—and plan for the massive capacity you’ll need to process it. The Cisco Unified Computing System (Cisco UCS) can scale to 10,000 servers, giving you the power to support the largest data clusters.

2. Maintain low TCO.

As more departments seek to gain predictive insights, the amount of data, as well as big data and analytics workloads, will continue to grow. As a result, infrastructure will eventually get very large. You need to make investments now that will deliver the lowest possible TCO both today and tomorrow.

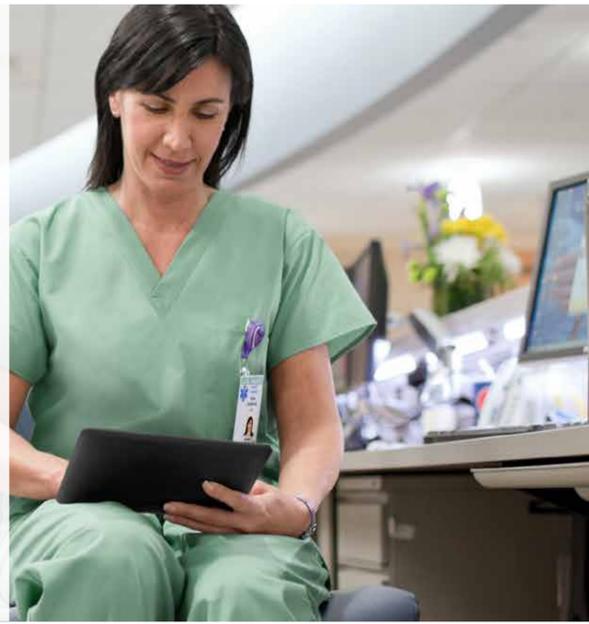


3. Have the flexibility to process analytics anywhere.

When you’re analyzing historical data for insights, it is fine to analyze it within the data center. But sometimes real-time insights are crucial. You need an infrastructure that can either move the analytics to the data or move the data to the analytics—whichever makes more sense for your organization.

4. Integrate your data.

To analyze your data, you must first be able to access it. But accessing your data can be a challenge because it lives throughout your infrastructure. Cisco Data Virtualization software abstracts data from all your sources, giving you a unified view of all the data you need to make better business decisions faster.



5. Choose the right analytics software for the job.

The world of analytics is characterized by nonstop innovation. Because new analytics applications are becoming available all the time, Cisco works with a large ecosystem of analytics leaders. This ecosystem enables you to choose the software you need and be confident that it’s supported by Cisco analytics-ready infrastructure.



5 steps to aligning IT to the needs of your organization



In the past, attempts to integrate data center infrastructure and applications have been manual, time-consuming, and expensive efforts. Fortunately, with the advent of cloud computing and hybrid IT, that situation is changing. IT can now be a catalyst for transformation: the enabler of innovation, new business models, and new revenue streams in five steps.

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Now by exercising new choices and new models, you can move from “No way!” to “Why not?”



1. Develop a vision.

Without a vision and a strategy for implementation, organizations can run themselves into the ground. First, make sure to determine how you want your operations to run. Then identify and remove the obstacles keeping you from achieving that vision. Our Cisco Domain Ten framework provides the path to strategic alignment of IT with your organizational goals.

2. Lay an infrastructure-as-a-service foundation.

The next step is to plan an agile infrastructure-as-a-service (IaaS) foundation to enable infrastructure services to be managed by IT in a highly automated way and to be delivered to your users in minutes, instead of weeks or days. This step is best accomplished by standardizing and integrating your IT components.



“With the Domain Ten framework, Skipton Building Society (the United Kingdom’s fourth-largest building society) is well-braced to have its IT organization continue to support its in-house SaaS application developments more effectively.”

3. Add the platform-as-a-service building block.

The platform-as-a-service (PaaS) building block uses the agility in the IaaS foundation to automate the provisioning of operating systems, middleware, and databases. This evolution ultimately delivers greater efficiency and flexibility in the development and deployment of cloud workloads.

4. Augment with software as a service.

New applications accessible through software as a service (SaaS) can empower organizations to quickly test new business concepts and implement new business models to advance their transformation goals.



5. Implement transformational change.

Talking about doing something and actually doing it are not the same thing. After constructing your new and improved infrastructure, you need to begin to reengineer and develop business processes and organizational structure to convert your recently developed vision into an optimized reality.

