



SMB Data Center Basics



From Network Closet to Center Stage

When did the data center go from being boulder number three in the school play to starring in the Broadway hit “Driving Business Innovation?” Blame the apps. And all those devices. With so many ways to access so many things from anywhere, businesses of all sizes think they can do anything. And they can – if they have the right platform in place.

Which brings us to you

Well, not just you. Most small businesses. Trying to make things go with a Frankensteined jumble of solutions from a bunch of vendors. You and a small IT team without the time or technical resources to make the leap forward to those cool new data center concepts you hear about. And living with the inconvenient truth that you’re just one natural disaster, hardware failure, or cyberattack away from going down for the count.

Stop stressing. We got you.

Cisco – yes, the same company that made its name in those very server closets – is making it easy for small businesses to transform their data centers into business-innovation engines, with smart solutions that power digital business while still accommodating the traditional, monolithic applications that are likely still the foundation of your business.

Now you can easily optimize an on-premises, private and public cloud infrastructure while supporting, securing, and managing the resources needed to drive business forward.



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3 Critical Data Center Components

We're betting you've heard of these concepts. But let's take a quick look at a few data center solutions that today's growing small businesses simply shouldn't be without.

Hyperconvergence

What is it

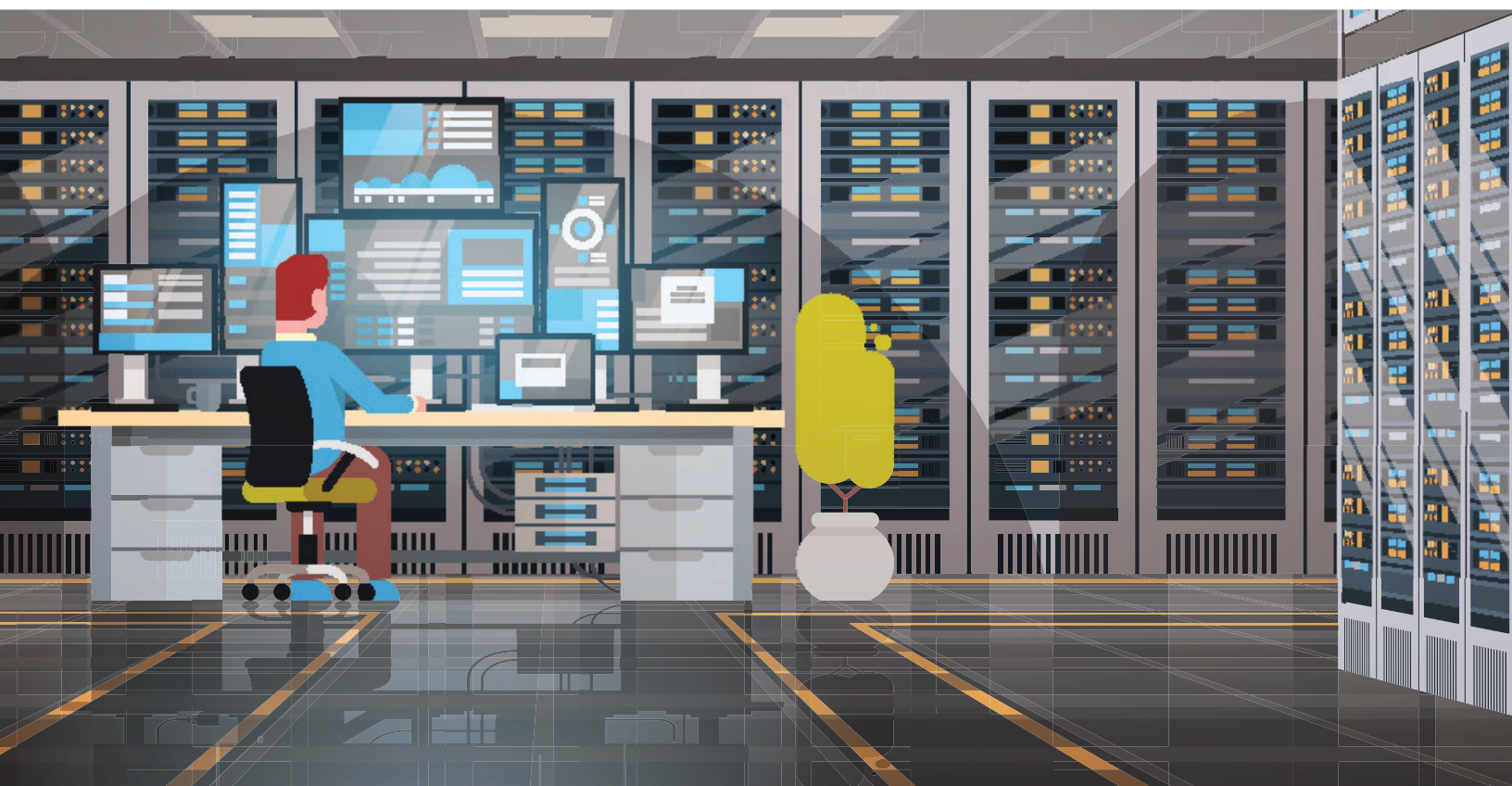
A hyperconverged infrastructure combines computing, storage, and connectivity with unified management.

Why it's good

- Simplifies deployment and network storage
- Makes it easy to scale computing resources without disrupting work
- Strengthens operational management
- Improves agility
- Delivers peace of mind with an always-on, self-healing infrastructure
- Delivers immediate and long-term cost savings

Cisco's take on it

- Cisco HyperFlex™ Multicloud Platform
- Complete hyperconvergence to increase operational efficiency and adaptability for data center workloads
- Simplified operations with a single management console for storage, computing, and networking
- Deployable in under an hour with pre-installed hypervisors
- Ready for any cloud and all your applications
- Efficient, cost-effective management of any application tier anywhere
- Pay-as-you-grow scale



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Digital Transformation

What is it

Using digital technologies to improve insight and efficiency to fundamentally improve how people work and how the business delivers value to customers.

What is required to realize it

- **Support for applications.** Modern applications are becoming less monolithic and more like organic entities that grow and shrink as needed. This reduces dependence on traditional IT infrastructure, and places new demands on IT organizations in terms of the large number of endpoints to manage and the flexible infrastructure needed to support them.
- **Better management.** IT personnel need to be able to manage infrastructure at scale, match resources to application requirements, and quickly roll out new applications and updates. All while managing all of the different types of infrastructure in a simple, holistic fashion.
- **Sprawl control.** Gone are the days when businesses could support and manage their clients and applications safely within an on-premises data center. Now they must support clients, applications, and workloads in public, managed, edge, and private cloud environments. And let's not forget the need to maintain compliance with best practices, business and governmental regulations, and data-sovereignty requirements.

Cisco's take on it

- Cisco Unified Computing System™ (Cisco UCS®)
- Not a collection of servers, but a unified, fully self-aware, self-integrating system
- Flexible, agile, and adaptable
- 100 percent programmable
- Supports a full portfolio, including:
 - Blade, rack, and storage-intensive servers
 - Converged infrastructure
 - Hyperconverged infrastructure
 - Solutions for the network edge



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Data Protection

What is it

Ensuring your data remains secure and available at all times no matter what comes your way.

Why it's important

- No data – no business
- Many small businesses never recover from downtime events
- Most downtime events are caused by human error or hardware failures, so even if you live in an area not prone to natural disasters, you're still at risk
- Recovering from downtime events can be exorbitantly expensive
- Simple backups to drives don't cut it – it takes too long to recover, the data is seldom current, and businesses seldom test the recovery process

Let's not forget policy

As modern data centers facilitate diverse and dispersed business activities, seamless orchestration, stout security, and consistent governance are essential. You need a common thread throughout all the environments, components, systems, and languages you're supporting. That common thread is application policy.

Policy is the single source of truth across all environments and elements. It reflects the intent of the business, controls applications, and automates the delivery of hybrid infrastructure.

Cisco's take on it

- The Veeam® Availability Solution
- Agile availability without needing a staff of consultants to perform extensive evaluation, testing, sizing, and setup
- Security, backup, and recovery of data wherever it resides
- Elimination of data loss
- Cloud-based backup and fast recovery
- Helps businesses meet the most stringent recovery time and point objectives
- When using Veeam on HyperFlex:
 - 80 percent reduction in data center deployment
 - Takes less than 60 minutes to deploy
 - Fast recovery, data-loss avoidance, and verified protections with Veeam SureBackup



Cisco is the only vendor that can deliver simplification, automation, protection, and analytics through a common, consistent policy model.

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Glossary

Business Continuity and Disaster Recovery (BCDR)

A set of processes and techniques used to help you recover from a disaster and continue or resume routine business operations.

Cloud Computing

The practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than local/on-premises servers.

Data Center

A large group of networked computer servers typically used for the storage, processing, or distribution of large amounts of data.

Data Center Policy

The requirements for designing, installing, securing, monitoring, maintaining, protecting, and decommissioning a data center.



Hybrid Data Center

A computing environment that uses a combination of cloud and on-premises, or physical, data centers.

Hyperconvergence

An IT framework that combines storage, computing and networking into a single system in an effort to reduce data center complexity and increase scalability.

On-Premises (On-prem) Data Centers

Private data centers that companies house in their own facilities and maintain themselves.

Private Cloud

A model of cloud computing in which IT services are provisioned over private IT infrastructure for the dedicated use of a single organization, usually managed via internal resources.

Public Cloud

Computing services offered by third-party providers over the public Internet, available to anyone who wants to use or purchase them. They may be free or sold on-demand, allowing customers to pay only per usage for the CPU cycles, storage, or bandwidth they consume.

Recovery Point Objective (RPO)

The age of files that must be recovered from backup storage for normal operations to resume if a computer, system, or network goes down as a result of a hardware, program, or communications failure.

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Recovery Time Objective (RTO)

The targeted duration of time and a service level within which a business process must be restored after a disaster (or disruption) in order to avoid unacceptable consequences associated with a break in business continuity.

Server

A device or a program that is dedicated to managing network resources; often referred to as dedicated, because it carries out hardly any other tasks apart from its server tasks.



Virtual Data Center

A pool or collection of cloud infrastructure resources specifically designed for business needs. The basic resources are the processor (CPU), memory (RAM), storage (disk space) and networking (bandwidth).

Learn more

Visit <https://www.cisco.com/c/en/us/products/hyperconverged-infrastructure/index.html> to learn more about how Cisco is making it easier and more affordable for small businesses to give the data center a starring role in business transformation.



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