

Myths vs. **realities** about centralized compute





Introduction

In an era of hybrid work, escalating security threats, and intense budget scrutiny, today's CIO faces the challenge of delivering a secure, flexible, and cost-effective IT strategy.

Traditional views may dismiss centralized architectures as rigid, legacy constructs — a perception that can lead to missed opportunities for transformation. This guide moves beyond the myths to present a strategic case for modern Virtual Desktop Infrastructure (VDI) and Desktop as a Service (DaaS) and considering centralized architecture as a comprehensive solution to today's IT challenges. You will find frameworks for evaluating how centralization can **drastically reduce Total Cost of Ownership (TCO)**, **harden your security posture**, **simplify business continuity**, and transform your IT organization into a strategic **enabler of business agility and growth**.

What are centralized and distributed infrastructures?

A **centralized infrastructure** is a system where critical operations like applications and data are delivered and managed from a central point and ensuring the security boundary is tightened.

Access to centrally delivered applications and data is delivered within the “walls” of application security controls, such as Desktop as a Service (DaaS) and secure enterprise browsers, to ensure data mobility is reduced and leakage is minimized.

In contrast, a **distributed infrastructure** allows applications and data to exist in a distributed manner, enabling local data storage and processing on endpoints, which is regularly synchronized back to centralized application service backends. This is the typical full laptop endpoint model, where all applications are installed and executed locally.

The core difference is not just control or complexity — it’s how each model handles drift. Centralized architectures dramatically reduces drift by maintaining a consistent, known-good state across resources. In contrast, distributed environments inherently introduce drift as endpoints evolve independently — accumulating changes, inconsistencies, and policy deviations over time. While this enables greater autonomy and offline access, it also creates compounding management, security, and cost challenges, as variability increases and the corporate security posture becomes harder to maintain at each individual endpoint.

Myths vs. realities about centralized infrastructure

Myth

Centralized models are outdated mainframe-era relics.

Reality

DaaS and secure browsers modernize governance, security, and operations across hybrid and multi-cloud.

Guidance

Perform a TCO analysis which includes operational costs of managing a secure, distributed, physical endpoint environment. Factor in the time your IT team spends maintaining application delivery and patching individual devices; the fully loaded software costs to secure and manage distributed endpoints; the security risks associated with corporate data being stored on scattered laptops; and the complexities of ensuring compliance across a diverse hardware fleet. By quantifying these hidden burdens, you can accurately consider a modern [DaaS](#) or [secure browser](#) solution as a forward-thinking investment in reduced data loss risk, reduced complexity, and reduced cost which frees budget for other pressing business mandates.

Guidance

Proactively design for high availability and resilience. Strategically employ load balancers so that if one server or cloud fails, user traffic is automatically redirected to a healthy instance without interruption. By intentionally building this redundancy into your architecture, you ensure that the failure of any single component is merely an alert to be addressed — not a catastrophic event — thereby guaranteeing business continuity for your end users.

Myth

Centralization creates a single point of failure.

Reality

DaaS uses redundancy and failover to avoid single-component outages.

Myth

Centralized compute makes Business Continuity and Disaster Recovery (BCDR) harder.

Reality

Centralized apps/data simplify BCDR through consistent backup, replication, and recovery.

Guidance

Centralization unlocks a powerful and streamlined approach to business continuity. The key action is to shift your disaster recovery focus from individual user devices to the central site itself. Instead of worrying about hundreds of scattered laptops, you can now implement a recovery plan for a single, well-defined environment. A prominent outage in 2024, affecting millions of endpoints and thousands of customers, demonstrated that distributed systems are significantly harder to recover at scale than centralized architecture.

This shift involves leveraging technologies to continuously replicate core infrastructure and user data to redundant locations, whether in another data center or a cloud region. By doing so, you transform a disaster — such as a flood or power outage at your primary site — into a simple, rapid failover event. This allows your entire workforce to reconnect and resume working in minutes, not days.

Practical tip: Define recovery objectives (RTO/RPO) for the centralized platform and automate failover/runbooks — treat endpoints as replaceable access devices.

Myth

Centralized systems require increased CapEx and overall higher costs.

Reality

DaaS shifts CapEx to OpEx, reducing upfront spend and smoothing costs.

Guidance

To accurately assess infrastructure costs, shift your perspective from the initial hardware price to a comprehensive TCO analysis. This modern approach reveals a crucial financial reality: a centralized infrastructure is conservatively [33% less costly](#) than a distributed model. These savings are achieved by repurposing existing hardware into immutable client endpoints, centralizing application delivery, management and support, and reducing software licensing and operational overhead.

You should explore DaaS and [secure enterprise browsers](#), as a streamlined, secure, and cost-effective application access strategy. With Citrix's new [Platform Flex](#) offering, you can further optimize by tailoring resource usage to persona needs and eliminating the burden of provisioning and managing backend infrastructure. This approach transforms your IT budget by converting upfront CapEx into predictable OpEx. With DaaS, you pay only for the resources you consume and can scale elastically on demand, eliminating the need for large upfront investments.



By 2027, virtual desktops will be cost effective for 95% of workers..."

— Gartner, Critical Capabilities for Desktop as a Service, Aug 18, 2025

Guidance

Different tasks require different levels of visual detail. Reading a document is not the same as watching a high-resolution video. A well-architected system understands this and automatically adjusts the visual quality to match the task and the strength of the user's connection. Technologies such as Citrix's HDX protocol effectively mitigate the impact of network latency, delivering a virtual workspace that is virtually indistinguishable from a local desktop. This empowers organizations to provide their remote workforce with secure, reliable, and high-performing access to the applications and data they need to be productive from anywhere.

Practical tip: Pilot with real workloads; place resource locations near users and monitor latency.

Myth

Centralized compute causes poor remote user experience due to latency.

Reality

Modern remoting protocols mitigate latency, delivering responsive performance for most users.

Myth

Centralized infrastructure scales only vertically and poorly.

Reality

Centralized platforms scale horizontally on-prem or cloud, adding capacity without endpoint sprawl.

Guidance

Many organizations today face pressing mandates for business resilience and continuity, where the ultimate goal is zero downtime. True enterprise-scale efficiency comes from designing for resiliency and scalability from the beginning. This means building your foundation — control plane, desktop delivery, networking, and storage — with the expectation of seamlessly expanding your central resource pool, utilizing cloud-based DaaS across availability zones for elastic scaling or ideally leveraging multiple clouds for the ultimate resiliency. Citrix's new Platform Flex offering simplifies the expansion of existing environments into hybrid and multi-cloud deployments without sacrificing cost control.

Guidance

Embrace a hybrid-cloud model with a universal control plane to your advantage. Begin by auditing your applications and user groups to determine the optimal hosting location for each — whether in your on-premises data center for maximum control and performance, or in a public cloud like Azure, AWS, or Google Cloud for global reach and elastic scale. By defining clear 'resource locations' in your cloud console, you can broker connections to these distributed environments and manage them through a unified management plane. This transforms your infrastructure into a resilient, agile, and user-centric workspace that places resources exactly where they deliver the most value, ensuring business continuity and a superior user experience regardless of location.

Consider also reducing operational costs for SaaS and web apps by utilizing secure enterprise browser technologies, which provide the same security and data isolation capabilities as DaaS and other device-centric endpoint technologies.

Myth

Centralized architecture confines you to one physical data center.

Reality

DaaS supports hybrid and multi-cloud; secure browsers fit many SaaS/web-only users.

Myth

Centralized systems cannot support work-from-anywhere.

Reality

DaaS and secure browsers enable work-from-anywhere access with centralized controls.

Guidance

Shift your IT strategy from locking down physical devices to managing an application-centric, universal user experience. Instead of worrying about individual hardware and tightly coupling applications to it, shift to a model focused entirely on applications and data.

While users enjoy the freedom to work safely on any device, Citrix provides a secure foundation with Unicon OS. This hardened, immutable operating system supports mobile and laptop form factors by delivering decoupled applications through a combination of DaaS and secure enterprise browsers. This approach eliminates expensive, performance-sapping endpoint management complexity, replacing it with a responsive end-user experience and centralized security. By decoupling the digital workspace from the physical hardware, you build an application-centric operational model that empowers your workforce and significantly reduces business costs.

Practical tip: Segment users by persona. Task workers, knowledge workers, developers, and power users rarely need the same delivery model; match each group to DaaS/VDI/secure browser/local device intentionally.

Guidance

Shift IT from managing endpoints to a single source of truth. Replace complex, device-centric control with app-centric virtual delivery that centralizes apps and data. Instead of maintaining hundreds of endpoints, deliver apps and desktops securely from the cloud via Citrix DaaS and Citrix Secure Access with Chrome Enterprise. With single-pane-of-glass management, IT moves from reactive support to proactive service delivery — reducing complexity and operational overhead. Citrix Platform Flex further reduces management overhead by combining flexible consumption with managed services that handle routine operations, lifecycle updates, and day-to-day administration — freeing IT teams to focus on higher-value initiatives.

Practical tip: Standardize images/policies and automate patching to keep operations predictable.

Myth

Centralized systems are too complex to manage.

Reality

Centralization can reduce overhead via unified management; endpoints drive sprawl and risk.

Key takeaways

Move beyond outdated myths to a modern centralized infrastructure for today's strategic enterprise. Centralized infrastructure allows you to:

- **Transform IT from a cost center to a strategic enabler:** Modern VDI and DaaS platforms like Citrix are not legacy constructs but strategic tools for improving data security and integrity, streamlining governance, and achieving sustainable operational efficiency. By shifting from reactive, device-based management to proactive application-centric and centralized delivery, your IT team is free to redirect resources to other strategic initiatives.
- **Deliver financial advantage through TCO reduction:** Centralization fundamentally changes IT economics. You can significantly reduce hardware, software, and support costs following a persona-driven approach and by managing a unified environment rather than disparate endpoints, all while preserving a robust security posture. A DaaS and enterprise browser approach can nearly eliminate capital expenditure, shifting IT spending to a predictable and scalable operational expense model.
- **Harden security posture and simplify business continuity:** Centralizing your architecture dramatically simplifies Business Continuity and Disaster Recovery. With all critical data and applications in one logical location, backup, replication, and restoration processes are accelerated and streamlined. This transforms a potential disaster into a seamless and rapid failover event, ensuring business continuity.
- **Enable a secure “work-from-anywhere” strategy:** VDI/DaaS and secure enterprise browsers are the ideal platforms for supporting a distributed workforce. They enable you to decouple work from physical locations and devices, delivering a standardized, high-performance, and secure corporate desktop to any user, on any device, anywhere in the world. This allows you to pivot your strategy from managing physical hardware to mastering a universal user experience.
- **Leverage the full spectrum of capabilities you already license:** Within your existing Citrix license, you can unlock significant operational efficiencies, enhance security, and empower your workforce with a flexible and high-performance environment driving greater value from your current infrastructure.

Learn more in our e-book

Centralized desktops vs. managed PCs : A smarter model for control and cost

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