

A New Option for Enterprise Organizations: Data Center Modernization as a Service



WHITEPAPER

Today's Modernization Conundrum

IT Organizations are struggling to keep pace with today's increasing technology demands. While many businesses are becoming increasingly reliant on digitalization—embracing more data-driven and virtualized operations—others remain hindered by outdated infrastructure, limited resources, and a shortage of skilled talent. Businesses rely more than ever on continuous innovation to stay ahead of their competition, which expedites time to delivery, enhanced user experience, and elastic in nature.

Enterprise Organizations experience challenges freeing up the sufficient capital required to invest in lifecycle and modernization efforts. This drives a fundamental change in IT investment strategies as clients work to transition from more of a CapEx model to OpEx model.

For most Enterprise Organizations, the vast majority of their annual IT budgets is spent on operations and maintenance (O&M), leaving less than a quarter of their budgets available for development, modernization, and enhancement (DME) of technology systems¹.

To succeed, Enterprise Organizations need modernization solutions that:



Dramatically improve their current capabilities, performance, and security



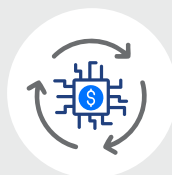
Position them for further growth and innovation in the future



Cost little or nothing more than what they currently spend for IT



Are highly automated and easy to manage



Are continuously optimized and refreshed to reduce costs, footprint, and energy



Leverage cost-effective cloud solutions

¹ Source: <https://federalnewsnetwork.com/management/2016/02/cat-mouse-game-federal-modernization/>

A New Approach to Data Center Modernization



CTG National and Cisco believe it is possible to address these common constraints and requirements in the marketplace by providing Enterprise Organizations with a data center modernization solution that achieves all of these objectives. This approach starts with an evaluation of the organization's existing infrastructure and technology needs. Working closely with all stakeholders, we then develop a strategy and deploy a roadmap for modernizing and optimizing the organization's data center and workload management.

A notional data center modernization solution could include the following features and capabilities:

- **Hybrid Cloud**
relying upon integrated management to leverage private and public clouds for improved flexibility, performance, and cost efficiencies
- **Security**
that leverages Zero Trust principles, Artificial Intelligence (AI) and Machine Learning (ML) to protect data center workloads
- **Converged Infrastructure**
to deliver a private cloud that can independently scale compute, storage, and networking to accommodate dynamic application workloads
- **Next-Gen Networking**
deliver seamless, secure data center connectivity
- **Hyperconverged Infrastructure (HCI)**
that offers cloud-like benefits, such as scalability, consolidation, efficiency and reliability while keeping legacy applications and sensitive workloads on-premises or collocated
- **Professional and managed services**
to help your organization with infrastructure assessments, architecture, cloud planning, and optimized workload management

Streamlined, automated management and other features

These capabilities should be simple to manage, operate, automate, in a manner that is open and extensible. To accomplish this, management platforms should enable unified orchestration across the entire infrastructure, delivering an integrated, end-to-end management platform for cost-effective delivery of services. Depending upon the requirements of the Enterprise Organization, key features of this notional data center modernization solution would include:

- An application-centric policy model that decouples policy (security, auditing, service-level agreements (SLAs), user experience, etc.) from network topology and supports application mobility
- An open and extensible policy framework that supports a defense-in-depth security strategy and helps protect investments
- Real-time visibility across the network, security, and supporting infrastructures to optimize data, application, and workload access
- Policy-based compliance with industry security frameworks and regulations such as Payment Card Industry (PCI) regulations and the Health Insurance Portability and Accountability Act (HIPAA)
- Centralized and automated lifecycle management of Layer 4 through 7 policies across the entire data center network
- Deep visibility and accelerated threat response based on real-time network intelligence
- Secure hardware-enforced network and application segmentation and multitenancy with performance and scalability

A Zero Trust architecture approach

This proposed modernization approach employs a holistic, systems-based model that addresses the unique security requirements required to extend from next-generation Data Centers to Cloud Environments. We propose using an intrinsic approach to Zero Trust, embedding unified application-centric, automated approach to seamlessly extend policy across data center and cloud infrastructure. The underlying network topology supports application mobility, offers real-time compliance lifecycle management, and reduces the risk of security breaches. Most significantly, this approach provides micro segmentation down to infrastructure, virtual machines, applications and workloads; drastically improving an Enterprise Organization’s ability to rapidly detect cyber-attacks while expediting remediation.

Data Center Modernization “as a Service” – A Pathway Toward Predictable Spend



Modernization brings about a unique opportunity to begin migrating to consumption-based financial flexibility, thus aiding into an OpEx model that enables predictable spend. This enables Enterprise Organizations to modernize infrastructure such as Compute, Storage, Networking, and Security; procured and deployed as an overall solution set. It also provides the agility needed to migrate between dedicated or shared infrastructure, disaster recovery, managed backups, and streamlined workload migration. In summary: Enterprise Organizations can reduce capital expenditures, simplify architecture and operations, accelerate time to value, and shift workforce focus towards delivering expedited value and continuous innovation.

CTG NATIONAL – A LEADER IN AI/ML TRANSFORMATION

CTG National is a leader in AI/ML, seeking to empower Enterprise Organizations to harness the advanced analytics, automation, and intelligent insights that drive real business outcomes. Our end-to-end portfolio spans high-performance compute infrastructure, scalable data platforms, and sensical strategies that accelerate AI adoption from inception to production. Our deep expertise, combined with our strong strategic partnerships with top AI/ML technology providers, enable us to help keep our clients at the forefront of technological innovation.

Key benefits

Our approach to modernization delivers many significant benefits to Enterprise Organizations:

- Shifts the risk for data center support, maintenance, and refresh to the contractor team
- Enables Enterprise Organizations with constrained CapEx budgets to leverage their OpEx spend as financing for much-needed modernization
- Automates manual, day-to-day operations across the IT environment, thereby enabling “Day 2” operations to be simpler, smoother, and repeatable
- Allows Enterprise Organizations to modernize confidently even if they lack needed modern IT skills
- Significantly reduces IT footprints due to efficiencies in storage (all-flash, compression, deduplication technologies) and increases in core/memory density and capacity (reductions in rack space up to 80 percent)
- Improves business agility and responsiveness with AI/ML-powered analytics and insights at machine speed
- Delivers substantial operational cost savings with new hardware, software and management tools

Conclusion

This unique approach to data center modernization offers Enterprise Organizations a compelling and affordable option for transitioning to advanced, automated, highly secure, open, and extensible infrastructures that optimize workload performance, access, and client experience. Let us see where you are in your lifecycle journey today with a free assessment and consultation. For more information, email us at contact@ctgnational.com or go to www.ctgnational.com.

About CTG National

CTG National, a Cohesive Technology Group company, is a small business that excels in servicing Enterprise Organizations with best-in-class information technology. Our experienced team of sales and engineering professionals design and deliver IT hardware and software solutions that save time and money for our clients. Headquartered in Virginia, we have dedicated resources in all regions across the continental United States.

Contracts

DUN & Bradstreet: 080932836
UEI: G2D4Q7UKR5P5
CAGE Code: 7ZHE9
NAICS Code(s): 541519



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