threadfin

Modern Data Centers

From legacy on-prem data centers to cloud adoption and into today's modern hybrid data center, the data center has come a long way. Today's challenges include security, compliance, cost management and the need for both new and legacy skill sets. **We've got that experience.**

The 7 Pillars of Modern Data Centers

Hybrid
- Hyperconverged Infrastructure
- Data Management
- Application Modernization

Compute
- Core & Edge Compute Servers
- Cloud Computing
- Smart Cloud & IOT

Virtualization
- Hypervisors
- Containers & Orchestration
- Hybrid Cloud Solutions

Storage
- SAN & NAS
- Flash/SSD/HDD Arrays
- Cloud Storage

Network
- Switches, Routers & Load Balancers
- Firewalls & Security Appliances
- Cloud Networking

Infrastructure
- Public, Private & Hybrid
- Racks & Cabinets
- Hyperconverged

Security
- Physical Security
- Cybersecurity Measures
- Backup & Disaster Recovery

	Legacy On-Premises	**Cloud Transition The Second Wave**	**Today Modern Hybrid**
FOOTPRINT	Mainframe-based on-premises infrastructure, primary & remote data centers, hot & cold disaster recovery sites	Moving on-premises to cloud with IaaS, PaaS & SaaS models, virtual & physical servers; blended disaster recovery sites	Multi-cloud & hybrid data centers, virtual/software-defined infrastructure, network/server/storage in virtual servers, comprehensive data strategy
ENABLERS	IP-based networking, Avaya/Nortel telephony & frame relay, dedicated IT teams managing & maintaining physical hardware	Cloud platforms like AWS & Azure, broadband advancements, cheaper WAN/cellular bandwidth, virtualization & cloud management tools	Software-defined networking, near-unlimited WAN/cellular bandwidth & storage, AWS, Azure & GCS; containerization maturing
SKILLS	Expertise in core infrastructure, IP networking, compute, scripting, security & voice communications management	Core infrastructure, virtualization, IP networking, compute, cloud service management, data migration, application modernization & cloud backup & security	Core infrastructure, virtualization, SDN, DevOps, FinOps, security & cloud-native technology
CHALLENGES	Fragmented management tools & limited scalability, high operational costs, heavy CapEx investment; lack of redundancy, cost of duplication	Refactoring legacy apps for cloud, cloud backups & disaster recovery, increased operational complexity, slanted towards Opex; cost & security	Integration of diverse cloud services, rapid tech evolution, legacy app placement for edge computing & security; blend of Capex & Opex; pervasive security concerns

pre-2005   2005 - 2018   2018 - 2024