

3 Trends Transforming the Data Center

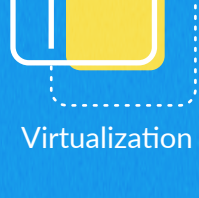
Data centers are becoming highly dynamic and complex. DevOps teams need to deploy new applications and services at the speed of light. Workloads and data are constantly moving across on-premises data centers and multi-cloud deployments.

Three trends are at the heart of this transformation:



1. Technologies requiring network elasticity and automation

Digital transformation is driving enterprises to adopt technologies that support dynamic workloads along with elastic networks that can scale on demand. The migration of big data from a batch processing function to a realtime service is a leading example.



Virtualization



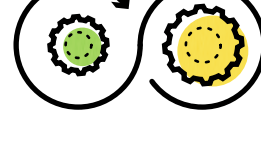
Software-defined networking



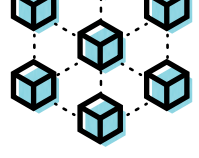
Hyperconvergence

2. DevOps moving at the speed of business

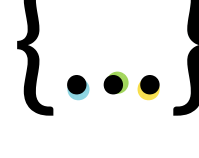
Enabled by new application technologies, software releases have moved from once or twice per year to many times per day. New applications can have components that run on-premises, in the cloud and across hybrid clouds at the same time.



CI/CD



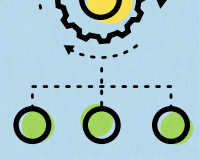
Microservices and containers



APIs

3. Orchestration of workloads

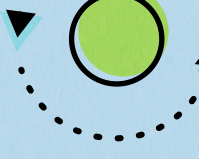
Workloads can now be orchestrated and provisioned in the data center and across the cloud. Applications can reside on-premises one day and in the cloud the next. New orchestration tools allow workloads to be easily provisioned, deployed and administered.



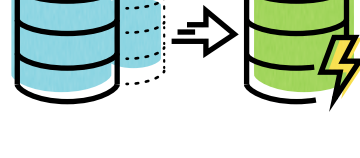
Workload mobility



Multi-cloud management



Automation



DIGITAL TRANSFORMATION

Virtualization, SDN and hyperconvergence



DEVOPS FOR BUSINESS AGILITY

CI/CD, microservices and APIs



HYBRID CLOUD IT

Workload mobility, multi-cloud management and automation

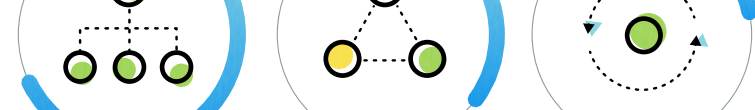
WORKLOADS ARE EVERYWHERE

We surveyed
170
enterprise data center managers

THIS IS WHAT THEY SHARED:

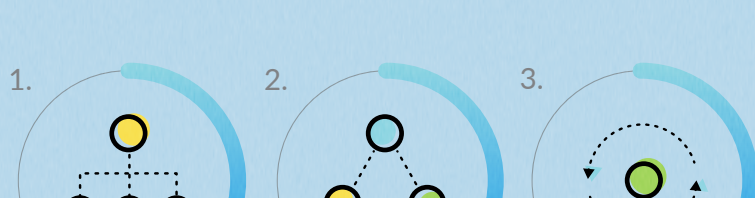
Top 3 technologies to be deployed in the next 12 months:

1. Virtualized infrastructure (68%)
2. Multi-cloud environment (35%)
3. Bare metal servers (22%)



Environment in which most workloads run in the data center:

1. Multi-cloud workload portability (61%)
2. Virtualization (55%)
3. Software-defined networking (43%)



Top 3 data center manager priorities:



Reducing risk from threats and breaches



Ensuring business continuity



Reducing operational complexity

Top 3 data center manager extreme challenges:



Protecting workloads wherever they go



Staying on top of new vulnerabilities, threats and exploits



Not enough visibility into users, devices and applications

60%

of respondents had at least one breach in the 18 months prior to the survey

SECURITY MUST TAKE CENTER STAGE

With the adoption of these new trends, enterprise data centers are evolving into incredibly complex entities. Protecting applications and workloads in a hybrid cloud data center requires a simplified, integrated architecture that provides:



Complete visibility

Offering a clear view of users, applications, devices, networks and workloads



Attack surface reduction

Using segmentation to enforce granular access control across north-south and east-west traffic



Automated threat prevention

Blocking threats in real time, discovering malicious activity and automatically isolating infected hosts with multilayered defense

Transform your data center with confidence and help your business move faster by reducing complexity with Palo Alto Networks

Check out our white paper on the three must-haves for hybrid data center security.

