



CONTENT FOCUS 2010

DATA CENTER STRATEGIES

Umbrella Technology Focus: New and future data center technologies for server, client and storage virtualization, compute densities, server and storage management improvements, cloud, and data center physical and logical architectures.

Burton Group Data Center Strategies (DCS) gives you actionable guidance on building and operating your data centers to achieve the efficiency of the dynamic data center.

Primary Areas of Focus for 2010

VIRTUALIZATION:

Server, client, and storage virtualization continue to expand beyond business enterprise production systems now extending their reach into networks. Continued integration of server virtualization with storage and network virtualization plus continued improvements in both x86 hardware and virtualization hypervisors has positioned virtualization for mission critical workloads in the data center. Client virtualization is also gaining momentum as a way to improve end user device management and experience while gaining tighter control over critical data assets. Virtualization is now laying the foundations for the dynamic data center – the core building block of elastic cloud type services. But the added capabilities of a virtualized infrastructure bring added risks in the area of network and system security, deployment, and management. Determining the best solution amongst the many available for the long term as well as how to organize and deploy the dynamic data center to achieve maximum efficiency can be daunting. Burton Group's in-depth approach to server, storage, and client virtualization technologies and methodologies enables IT administrators to get below the surface and understand how best to architect and deploy these technologies to cost effectively solve business problems.

STORAGE:

Digital storage growth continues to demand an ever growing share of the IT budget. The need for increased efficiency to reduce capital and operational expenses continues to mount. Technologies such as data deduplication, storage tiering, and thin provisioning promise and offer relief, but only when deployed properly. Additionally, virtual infrastructures continue to demand more and more performance and capacity from storage networks. Regulatory retention requirements, and the need for increased availability and protection across all data types continues to drive the move to technologies other than tape for data protection in the

enterprise. This has created the need for IT organizations to architect and build storage infrastructures and storage management systems that can stand the test of time.

Burton Group's coverage of storage technologies and trends in the areas of SAN, NAS, iSCSI, FCoE, archiving, cloud storage as a service, information lifecycle management, Disk-to-Disk backup, Solid State Disks, and other emerging storage technologies helps organizations architect storage infrastructure systems and policies to meet demands of the dynamic data center today and into the future.

COMPUTE:

Virtualization offers real solutions to data center growth problems, but brings along a set of problems namely the increased system I/O demand from consolidation. Newer server hardware sporting multiple CPU cores, blade servers for increased density and efficiency, I/O bus enhancements including single and multi-root I/O virtualization, CPU enhancements supporting virtualization, improvements in operating systems including 64-bit computing, performance improvements, and power management improvements put pressure on organizations to get the greatest amount of compute out of the money they spend. Burton Group provides guidance on strategies in compute density, server hardware, operating systems, and high performance computing coupled with cloud to enable organizations to improve efficiency at minimal cost. Future proofing data center architectures to harness technical advances in hardware, operating systems, and supporting infrastructure is addressed.

OPERATIONS AND MANAGEMENT:

The ever increasing needs for more compute power and throughput in order to remain competitive in the market place have placed a strain on data center facilities – especially power and cooling capacity. Data center space, power and cooling is at a premium especially with ever tightening budgets. Traditional data center designs for cooling and power distribution are changing to enable higher efficiency and drive towards a "greener" state of operations. Detailed

monitoring and management of equipment, including servers, storage, virtual infrastructures, and power and cooling, is becoming a requirement for managing a high efficiency data center. Virtual infrastructure management automation and orchestration has rapidly become the method to stem the tide of explosive data and virtual server growth, and manage rising data center costs. In addition, operational modes—such as disaster recovery—demand planning and practice to ensure business continuity. Business pressures organizations face today require a flexible IT infrastructure that can transform the data center from expenditure into a competitive advantage that includes a dynamic hybrid of internally and externally supplied cloud solutions. Burton Group provides in-depth coverage on data center infrastructure operations, element management, virtual infrastructure management, managed services, co-location, and disaster recovery operational modes necessary for IT administrators to plan IT operations and manage the dynamic data center.

Additional Areas of Focus for 2010

- Cloud Computing Hardware Infrastructure as a Service
- Data Center cost modeling
- Data Center Consolidation
- High performance computing and grid in the cloud