Next Generation Data Centers

1	Executive Overview	
2	Market Drivers & Industry Dynamics	
3	Market Segments & Product Requirements	
4	Market Forecast & Market Shares	
5	Enabling Technology Trends & Standards	
6	Competitive Products & Positioning	
7	Major Suppliers & Supplier Strategies	
8	Channels of Distribution	
9	Research Methodology	
10	Appendices & Resources	



Executive Overview

CHAOS IN THE LEGACY DATA CENTERS	3
Genesis of Next Generation Data Center	3
A New Data Center Model Needed	
Data Center Automation Targets	
Managing Datacenters – Cost by Function Performed	5 5
Datacenter Workload Distribution	
Growth Drivers for Blade Servers	6
Towards de facto standardization	6
Change is afoot on the server front	
APPLICATIONS DRIVEN ARCHITECTURES	
Product Requirements in 3 Tier Computing	8
Infrastructure Layers	
DATA CENTER CHALLENGES FOR CIOS	
Doing more with less	10
IT Trends driving Next-Gen Data Center Architecture	10
THE RISE OF BLADE COMPUTING	
Migration to x86 Servers	13
Consolidated Data Center using Blades	14
Fabric Computing – Key to Integration in Next Gen Data Center	14
Blades – TCO & ROI Analysis	
Blade Server Infrastructure	
Blade Systems Leaders - Market Shares	
Blade Servers – Shipments vs ASP by Vendor	
Blade Servers - Vendor Positioning Index	16
MARKET OF CHENTO BY MA JOB ARRIVED TO A	
MARKET SEGMENTS BY MAJOR APPLICATIONS	1 <i>1</i>
TRANSACTION PROCESSING & BUSINESS INTELLIGENCE	17
TRANSACTION TROCESSING & BOSINESS INTELLIGENCE	11
DATABASE IN MEMORY	18
HIGH PERFORMANCE COMPUTING	19
VIRTUALIZATION	20
Virtualization Models	20
Workload Consolidation using VirtualizationInfrastructure Virtualization	
Data Center Architecture with Dedicated Resources	
Compute Layer Consolidation and Virtualization	
Network Layer Consolidation and Virtualization	21
Data center with a virtualized network layer.	2
Storage Layer Consolidation and Virtualization	22
Data Center Architecture with Virtualized Network and Storage Layers	23

NGDC Industry Report © 2005-08 IMEX Research

END-TO-END VIRTUALIZED DATA CENTER ARCHITECTURE	24
End-to-End Intelligent Services	24
Compute Layer Intelligent Services	24
Network Layer Intelligent Services	
Storage Layer Intelligent Services	25
Virtualization Implementation	26
Hardware Assisted Virtualization	26
Storage Virtualization	
Virtualization Players	
TCO/ROI Analysis using Virtualization	28
Data Storage Growth	
Enterprise Data Storage Demand Characteristics	
Storage Data and Types	
Corporate Data Usage – Access Frequency vs. % of Data	
Enterprise Host to Storage Connections	
Enterprise Storage Interfaces Transitions	37
Tiered Storage by Price/Performance	37
Market Adoption of Storage Virtualization	33
Economics of Storage Virtualization	34
The Convergence Factor: SCSI/FC/InfiniBand/IP	34
SNICs – high performance NICs for Storage & Security	
FC over Ethernet	36
NPIV	36
Virtual Storage Connectivity	37
Storage Management	
Unified Communications	38
SUMMARY AND RECOMMENDATIONS	39
Virtualization 2007	
Cave ats	
Focus On Goals	
Implementation Strategies	