

WINTERGREEN RESEARCH, INC.

**Cloud Computing Virtualization – Market Strategies,
Shares, and Forecasts, Worldwide, 2010-2016**

**Cloud Computing Systems Provide: IT Efficiency --
Capacity on Demand**



Picture by Susie Eustis

MOUNTAINS OF OPPORTUNITY

OPPORTUNITY ABOUNDS

**WinterGreen Research, Inc.
Lexington, Massachusetts**

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Agile Development
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IT Service Management
ITIL
Internet
Microsoft Live
Open Source
SOA
SOA Governance
SOA architect
SaaS
Cloud Security
Software Development
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Cloud Systems Management
Information Technology
Cloud Computing
Virtualization
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Cloud Hardware...
Cloud Based Collaboration
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Cloud Computing Security
Cloud Data Center
Cloud Systems Management
Cloud Virtualization
Citrix XenServer
VMWare
Windows Hyper-V
Cloud Storage Systems

Cloud Computing Layers: SaaS, IaaS, PaaS

Web Services

Enterprise CMS
Enterprise SaaS
Google apps
Defense High Performance Computing
Defense HPC market
Cloud High Performance Computing
Military High Performance Computing
Military HPC

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Cloud Computing Virtualization: Market Strategies, Shares, and Forecasts, Worldwide, 2010-2016

LEXINGTON, Massachusetts (April 5, 2010) – WinterGreen Research announces that it has a new study on: Cloud Computing Virtualization: Market Shares and Forecasts, Worldwide, 2010-2016. Virtualization of software and servers creates ways to create more effective automated control of business process. The on-demand deployment model depends on the implementation of cloud computing. The ability to deploy virtual application images on any platform at any time has increased significantly. Business software as a service SaaS applications and cloud computing models have matured and adoption has become an issue for every IT department.

Private cloud systems provide security, response time, and service availability. Applications, platforms, and infrastructure are evolving separately. SaaS software as a service application is widely known by the salesforce.com computing model. Platform as a service (PaaS) and infrastructure as a service (IaaS) complement SaaS as compelling aspects of cloud computing and infrastructure services. An organization's application development team and the application portfolio need to be managed as a piecemeal part of the IT infrastructure. It is generally managed on an application by application basis. Applications represent a major source of IT value and are a large IT cost component.

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Markets depend on virtualization to make information technology delivery a utility. On demand systems scale to meet the needs of users and users only pay for the capacity they use. Strategies relate to different ways to position software, hardware and services for the most effective product set. The 2010 study has 736 pages, 231 tables and figures.

The popularity of the on-demand deployment model has increased significantly. Systems provide security, response time, and service availability. SaaS software as a service application is widely known by the salesforce.com computing model illustrates. Business applications and computing models have matured and adoption has become an issue for every IT department. Platform as a service (PaaS) and infrastructure as a service (IaaS) have joined SaaS as compelling aspects of cloud computing applications and infrastructure services.

The IBM mainframe has the reliability, scalability, security, large block of memory, shared workload capability, and remote support capability needed in cloud computing. These are called the ity features. IBM mainframe leads enterprise cloud computing. IBM mainframe strategy seeks to permit users to utilize data, applications and services from any device and from any location based on open standards.

The IBM mainframe is able to virtualize new workload. The IFL virtualization provides a stable secure hosting environment for thousands of application images. IBM SOA cloud software is the leading integration system with 72% market share of a rapidly growing systems architecture. The code modules provide a way to make flexible systems that respond to changing market conditions.

Cisco virtualization is delivered through Unified Computing. As a premier networking company, Cisco has designed a compelling architecture that bridges the silos in the data center. A unified architecture uses industry standard technologies. Key to Cisco's approach is the ability to unite compute, network, storage access, and virtualization resources. A single energy efficient system can reduce IT infrastructure costs and complexity. It is used to extend capital assets and improve business agility.

Hewlett Packard High-performance computing (HPC) markets are powered by the adoption of Linux clusters. High-performance computing (HPC) markets are powered by the adoption of Linux clusters. Cluster complexity is rampant hardware parallelism: systems averaging thousands of processors, each of them a multi-core chip whose core count doubles every 18.24 months.

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Hardware parallelism trend the additional issues of third-party software costs, weak interconnect performance, the difficulty of scaling many applications beyond a single node, storage and data management, power, cooling, and facility space,.

Cluster complexity quickly begins to skyrocket. Hewlett-Packard (HP) has the HPC cluster market share leadership position. Competitive advantage has been achieved principally by working to alleviate cluster complexity through a coordinated strategy of investment and innovation, HPC-centric product planning and design, external partnerships, application expertise and focus.

System integration, sales, and support are part of the HPC cluster solution. HP has dominated the market by focusing on alleviating this complexity for datacenter administrators and end users. HP's broad product portfolio for HPC also leverages the company's innovations for the mainstream enterprise IT market and advances from HP Labs.

HP has taken a customer-centric, technology-agnostic approach that offers buyers a wide range of technology and product choices. The company has amassed the in-house domain expertise needed to act as a trusted advisor to HPC users. HP has an innovative approach to the HPC market. The company is positioned to sustain its strong presence. The ability to exploit near-term growth trends depends on continuing to grow out the cluster capability leveraging virtualization.

The major management objectives for this critical area of applications implementation include improving service-oriented architecture (SOA) adoption, increasing Software Development Life Cycle (SDLC) efficiency, improving cost management, and reducing ineffective spending.

The fundamental aspect of cloud applications implementation relates to flexibility. The ability to be responsive to changing market conditions is central to the modern IT management task. The desire for systems that support flexibility is anticipated to spur rapid growth of cloud computing. Cloud computing markets at \$20.3 billion in 2009 are anticipated to reach \$100.4 billion by 2016.

Keywords:, cloud computing, cloud hardware infrastructure, IBM, IT Management, IT Service Management, ITIL, System z, SaaS, PaaS, IaaS, Internet, Microsoft, Microsoft Live, Open Source, SOA, SOA Governance, SOA architect, SaaS, Security, Software Development, Software Infrastructure, Virtualization, Web Technology, Windows, business intelligence, datacenters, governance, management, Information Technology, Cloud Computing, Cloud Based Collaboration, Cloud computing telepresence, Online meetings, cloud stack layers, wintergreenresearch.com.
<http://wintergreenresearch.com/reports/cloudSaaS.html>

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Companies Profiled

Market Leaders

Hewlett Packard
IBM
Google
Adobe Systems
Salesforce.com
BMC
EMC / VMWare
Amazon
Microsoft Dynamics GP
Cisco
Brocade
Panda Security
NetSuite
Software AG
AT&T
Tibco
Xerox
CA / 3Tera
RedHat
Yahoo

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Cloud Computing Market Participants

Cloud Computing Company Profiles

Akamai
Areti Internet
AppScale
Ariba
Axios
Cassiopeia Internet / Constellate
CDC Software
Consona
CrownePeak
Dell
Descartes
Enki
Facebook
FedEx
FrontRange Solutions
Fortress ITX
Fujitsu
Inteq
Joyent
Juniper
Ketera
Layered Technologies
Linked IN
Novell Interoperable Linux Cloud Platforms
Omniture
Oracle
Progress Software
Rackspace
RightNow Technologies
Rightscale
Sage Figures CRM into its Equation
Savvis
Service-now.com
SugarCRM
SumTotal
Symantec

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Tenzing Cloud Computing Services
Twitter
Verizon
Workday

**Cloud Computing Stack Layers – IaaS, PaaS, SaaS Market
Strategies, Shares, And Forecasts, Worldwide,
2010 to 2016**

Report Methodology

This is the 439th report in a series of primary market research reports that provide forecasts in solar energy, robots, communications, telecommunications, the Internet, computer, software, telephone equipment, health equipment, and batteries to store energy. Automated process and significant growth potential are a priorities in topic selection. The project leaders take direct responsibility for writing and preparing each report. They have significant experience preparing industry studies. Forecasts are based on primary research and proprietary data bases.

The primary research is conducted by talking to customers, distributors and companies. The survey data is not enough to make accurate assessment of market size, so WinterGreen Research looks at the value of shipments and the average price to achieve market assessments. Our track record in achieving accuracy is unsurpassed in the industry. We are known for being able to develop accurate market shares and projections. This is our specialty.

The analyst process is concentrated on getting good market numbers. This process involves looking at the markets from several different perspectives, including vendor shipments. The interview process is an essential aspect as well. We do have a lot of granular analysis of the different shipments by vendor in the study and addenda prepared after the study was published if that is appropriate.

Forecasts reflect analysis of the market trends in the segment and related segments. Unit and dollar shipments are analyzed through consideration of dollar volume of each market participant in the segment. Installed base analysis and unit analysis is based on interviews and an information search. Market share analysis includes conversations

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with key customers of products, industry segment leaders, marketing directors, distributors, leading market participants, opinion leaders, and companies seeking to develop measurable market share.

Over 200 in depth interviews are conducted for each report with a broad range of key participants and industry leaders in the market segment. We establish accurate market forecasts based on economic and market conditions as a base. Use input/output ratios, flow charts, and other economic methods to quantify data. Use in-house analysts who meet stringent quality standards. Interviewing key industry participants, experts and end-users is a central part of the study. Our research includes access to large proprietary databases. Literature search includes analysis of trade publications, government reports, and corporate literature.

Findings and conclusions of this report are based on information gathered from industry sources, including manufacturers, distributors, partners, opinion leaders, and users. Interview data was combined with information gathered through an extensive review of internet and printed sources such as trade publications, trade associations, company literature, and online databases. The projections contained in this report are checked from top down and bottom up analysis to be sure there is congruence from that perspective.

The base year for analysis and projection is 2009. With 2009 and several years prior to that as a baseline, market projections were developed for 2010 through 2016. These projections are based on a combination of a consensus among the opinion leader contacts interviewed combined with understanding of the key market drivers and their impact from a historical and analytical perspective. The analytical methodologies used to generate the market estimates are based on penetration analyses, similar market analyses, and delta calculations to supplement independent and dependent variable analysis. All analyses are displaying selected descriptions of products and services.

This research includes referencde to an ROI model that is part of a series that provides IT systems financial planners access to information that supports analysis of all the numbers that impact management of a product launch or large and complex data center. The methodology used in the models relates to having a sophisticated analytical technique for understanding the impact of workload on processor consumption and cost.

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WinterGreen Research has looked at the metrics and independent research to develop assumptions that reflect the actual anticipated usage and cost of systems. Comparative analyses reflect the input of these values into models.

The variables and assumptions provided in the market research study and the ROI models are based on extensive experience in providing research to large enterprise organizations and data centers. The ROI models have lists of servers from different manufacturers, Systems z models from IBM, and labor costs by category around the world. This information has been developed from WinterGreen research proprietary data bases constructed as a result of preparing market research studies that address the software, energy, healthcare, telecommunications, and hardware businesses.

Cloud Computing Virtualization: Market Shares and Forecasts, Worldwide, 2010-2016

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Public Cloud Grows Faster Than The Private Cloud
 Facebook Technology

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Cloud Computing Virtualization Product Description

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ELLEN T. CURTISS, TECHNICAL DIRECTOR, CO-FOUNDER OF WINTERGREEN RESEARCH, CONDUCTS STRATEGIC AND MARKET ASSESSMENTS IN TECHNOLOGY-BASED INDUSTRIES. PREVIOUSLY SHE WAS A MEMBER OF THE STAFF OF ARTHUR D. LITTLE, INC., FOR 23 YEARS, MOST RECENTLY AS VICE PRESIDENT OF ARTHUR D. LITTLE DECISION RESOURCES, SPECIALIZING IN STRATEGIC PLANNING AND MARKET DEVELOPMENT SERVICES. SHE IS A GRADUATE OF BOSTON UNIVERSITY AND THE PROGRAM FOR MANAGEMENT DEVELOPMENT AT HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION. SHE IS THE AUTHOR OF RECENT STUDIES ON WORLDWIDE TELECOMMUNICATIONS MARKETS, THE TOP TEN INTERNET EQUIPMENT COMPANIES, THE TOP TEN CONTRACT MANUFACTURING COMPANIES, AND THE TOP TEN TELECOMMUNICATIONS MARKET ANALYSIS AND FORECASTS.

SUSAN EUSTIS, PRESIDENT, CO-FOUNDER OF WINTERGREEN RESEARCH, HAS DONE RESEARCH IN COMMUNICATIONS AND COMPUTER MARKETS AND APPLICATIONS. SHE HOLDS SEVERAL PATENTS IN MICROCOMPUTING AND PARALLEL PROCESSING. SHE HAS THE ORIGINAL PATENTS IN ELECTRONIC VOTING MACHINES. SHE HAS NEW PATENT APPLICATIONS IN FORMAT VARYING, MULTIPROCESSING, AND ELECTRONIC VOTING. SHE IS THE AUTHOR OF RECENT STUDIES OF SOA MARKETING STRATEGIES, INTERNET EQUIPMENT, CLOUD COMPUTING, BIOMETRICS, A STUDY OF INTERNET EQUIPMENT, WORLDWIDE TELECOMMUNICATIONS

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