

2010–2014

Global Cloud Security Software Market



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## 01. Executive Summary

<b>Market Size</b>	<ul style="list-style-type: none"> <li>• 2010: US\$241 million</li> <li>• 2014: US\$963.4 million</li> </ul>
<b>Growth Rate</b>	<ul style="list-style-type: none"> <li>• 41.4 percent CAGR</li> </ul>
<b>Key Geographies</b>	<ul style="list-style-type: none"> <li>• The Americas</li> <li>• EMEA</li> <li>• APAC</li> </ul>
<b>Key Customer Segments</b>	<ul style="list-style-type: none"> <li>• Large Enterprises</li> <li>• Government Agencies</li> <li>• Cloud Service Providers (CSPs)</li> <li>• Medium-sized Enterprises</li> </ul>
<b>Trends</b>	<ul style="list-style-type: none"> <li>• Increasing Partnerships between CSPs and Security Solution Providers Expected</li> <li>• Increasing Emergence of Cloud Service-specific Security Solution Providers</li> <li>• Identity Management and Encryption to Remain the Top Cloud Security Solutions Offered</li> <li>• Increasing Availability of Cloud Security Solutions for Small and Medium-sized Businesses (SMBs)</li> <li>• Emergence of Strong Cloud Security Standard and Guidelines</li> </ul>
<b>Drivers</b>	<ul style="list-style-type: none"> <li>• Increasing Usage of Cloud Services in Non-traditional Sectors</li> <li>• Growing Adoption of Cloud Services in Government Departments</li> <li>• Rise in Cloud Service-specific Attacks</li> <li>• Growing Usage of Cloud Services for Critical Data Storage</li> <li>• Rise in Employee Mobility</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• CSPs Believe that Security is End-users' Issue</li> <li>• Lack of Awareness about Cloud Security</li> <li>• Inconsistent Network Connection Issues</li> <li>• Lack of Proper Cloud Security Standards</li> </ul>
<b>Key Customer Needs</b>	<ul style="list-style-type: none"> <li>• Strong Overall Security Offered</li> <li>• Suite of Security Solutions Offered</li> <li>• Encryption Key Management Features Offered</li> <li>• Availability of Fine Granular Control</li> </ul>

<b>Key Vendors</b>	<ul style="list-style-type: none"><li>• Trend Micro Inc.</li><li>• McAfee Inc.</li><li>• CA Technologies</li><li>• Symplified Inc.</li></ul>
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## 02. Introduction

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Cloud security software provides security to cloud-based services or cloud computing architectures. Cloud security software can be a standalone solution or a suite of products. It focuses on the security of key parameters such as compliance, governance, data protection, architecture, and identity and access. A typical cloud security solution offers features such as encryption, identity and access management (IAM), endpoint monitoring, vulnerability scanning, intrusion detection, and application and messaging security.

The Global Cloud Security Software market mainly caters to the Banking, Insurance, Healthcare, E-commerce, and Government sectors. It is witnessing strong growth compared to the Global Security Software market. Currently, the market is growing at a rate of just over 25 percent. Geographically, the main revenue generator of this market is the Americas, particularly the United States (U.S.) because it is the major adopter of cloud services solutions. Western European countries such as the United Kingdom (U.K.), France, Germany, and some other European Union (EU) countries are also expected to aggressively adopt cloud security solutions in the future. Thus, buoyed by a strong rate of adoption, the growth of the Global Cloud Security Software market is expected to increase to just over 50 percent by 2014.

The main drivers for the Global Cloud Security Software market are the growing use of cloud services for critical data storage and the sudden increase in cloud-specific attacks. Driven by multiple factors such as flexibility, cost saving, and availability, an increasing number of companies are transferring their data to the cloud (though this is also exposing these companies to various risks associated with cloud computing). Some of the other drivers for this market are the increasing use of cloud-based services in non-traditional sectors and the rise in employee mobility.

Despite strong growth drivers and interesting trends, the Global Cloud Security Software market is pegged with some growth inhibitors. Some cloud service providers (CSPs) still believe that cloud security is the end-users' responsibility, nor is security a strong buying criterion for end-users. Hence, providers shy away from offering cloud security solutions. Another major issue is the lack of awareness among end-users about the risks associated with cloud computing. Other challenges are inconsistent network connections and lack of proper cloud security standards.

However, the increasing adoption of cloud-based services and the growing criticality of data in the cloud are expected to boost the adoption of cloud security solutions. The Global Cloud

Security Software market is expected to improve its growth rate from the current rate of just over 25 percent to just over 50 percent by the end of 2014.

## 03. Market Coverage

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### Overview

This report covers the Cloud Security Software market in the Americas; the Europe, Middle East and Africa (EMEA) region; and the Asia Pacific (APAC) region. The report takes into consideration the security software/solutions and services available in the markets of cloud-based services or cloud computing architectures for end-users.

This report also discusses the vendors that provide cloud security solutions to end-users (where end-users can either be CSPs or clients of CSPs, and can be direct customers of cloud security software vendors). The report also includes vendors that may not have software/solutions of their own, but provide solutions by collaborating with cloud security providers. In addition, the report includes vendors that have entered the Global Cloud Security Software market through acquisitions. Both product/license revenues and service revenues have been considered in the calculation of vendor revenue.

However, the report does not include virtualization security because it is treated as a separate segment. Nor does the report include the Cloud Back-up market. Further, the report does not include the revenues earned by cloud security software vendors from virtualization and cloud back-up services and solutions. The report also excludes security solutions that are based in the cloud (Software as a Service (SaaS) based), but are not dedicated toward a cloud computing environment.

### Key Products/Solutions

Some of the key cloud security solutions available in the Global Cloud Security Software market are:

- Trend Micro SecureCloud, and Trend Micro Deep Security
- McAfee Cloud Security Platform
- CA Access Control, and CA Identity Manager
- Symplified Mobile Edition, Symplified Access Manager, and Symplified Identity Manager
- CloudPassage cloud server exposure management
- Okta Cloud Services Platform
- GuardTime Keyless Signature Server
- CipherCloud Data Protection for Salesforce



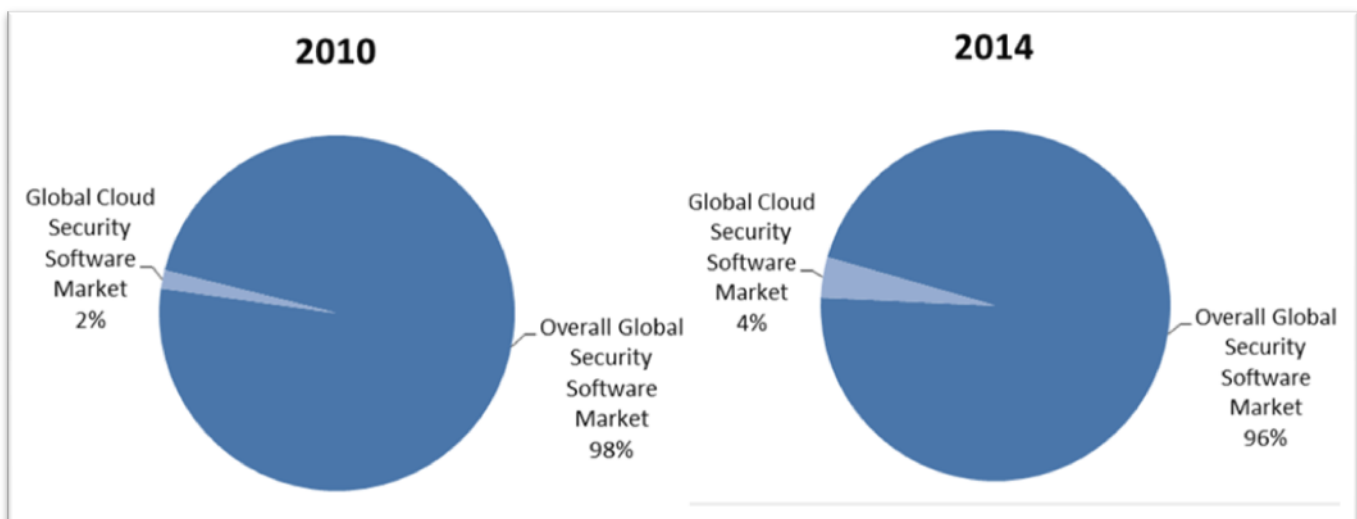
## 04. Market Landscape

### Market Overview

Though the Global Cloud Security Software market is registering strong growth from all geographic regions, it is still niche and small. Further, despite the Cloud-based Security Solutions (SaaS-based security solutions) market being of considerable size, the Security Solutions market that is dedicated toward a cloud computing environment is small.

The Global Cloud Security Software market is a part of the Global IT Security market and accounted for only about 2 percent of the latter market in 2010. However, the Global Cloud Security Software market is growing at a higher rate than the Global IT Security Software market and is expected to account for 4 percent of the latter market by 2014.

Exhibit 1: Global Cloud Security Software Market as a Percentage of Global IT Security Software Market 2010 and 2014



Source: TechNavio Analysis

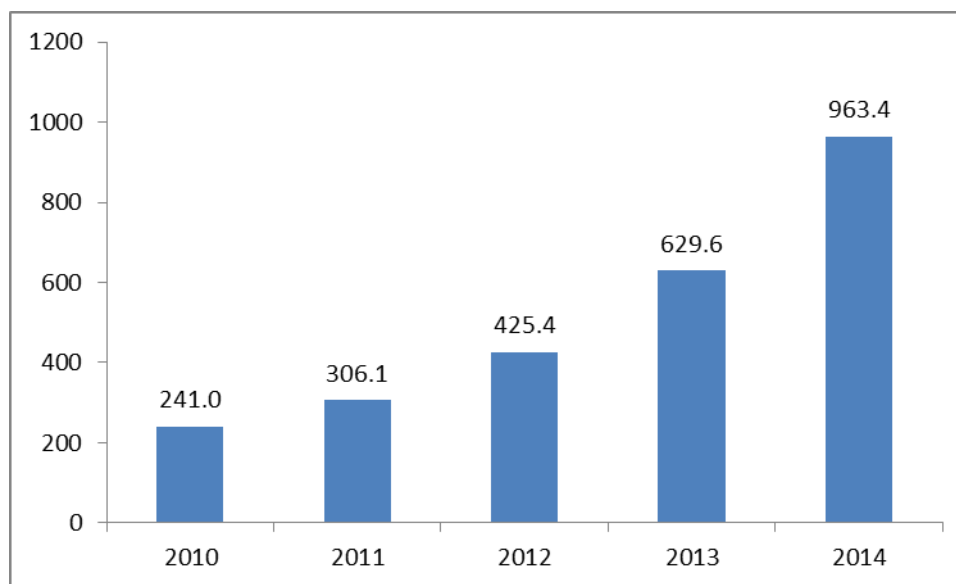
Currently, the adoption rate of cloud security is low and it is estimated that only 35 percent of the enterprises migrating to cloud services consider cloud security to be a top priority.

At present, IAM and encryption represent the majority of the Global Cloud Security Software market, with a combined share of around 40 percent.

## Market Forecast

The Global Cloud Security Software market was valued at US\$241 million in 2010 and is expected to reach US\$963.4 million in 2014; growing at a CAGR of 41.4 percent.

Exhibit 2: Global Cloud Security Software Market 2010–2014 (US\$ million)



Source: TechNavio Analysis

The Global Cloud Security Software market is one of the strong growing markets. However, unlike most IT Security markets, which started picking up from the early 2000s, the Global Cloud Security Software market is a rather new segment. This market witnessed growth, particularly after 2009 during the post-economic downturn when companies started adopting cloud services for cost cutting and several other reasons. This period also witnessed the emergence of cloud-specific threats. Thus, to balance the migration to cloud services without compromising security, companies started adopting cloud security solutions.

The Global Cloud Security Software market, buoyed by several factors such as increasing reliance on cloud services, growing hosting of servers, and emergence of cloud-specific threats, is expected to improve its growth rate. Currently, the market is growing at a rate of little over 20 percent. However, cloud adoption is expected to get a boost by 2012–2013, and the market growth is expected to increase rapidly to over 45 percent by the end of 2013. Further, the increasing adoption of cloud services, such as cloud applications (SaaS), during 2013–2014 is expected to provide impetus to the Global Cloud Security Software market, resulting in growth of over 50 percent by the end of 2014.

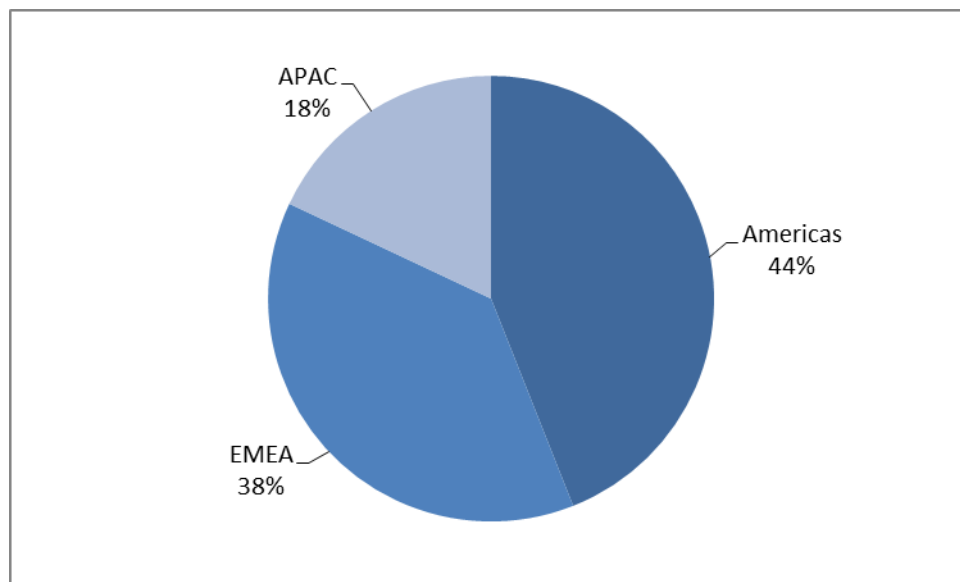
## Geographic Segmentation

The Americas dominates the Global Cloud Security Software market, with 44 percent of market share. Further, in the Americas, the U.S. plays a vital role in generating revenues; it contributes more than 60 percent to the total revenue generated by the Americas.

There are several reasons for the high contribution from the Americas. Some of the reasons are the presence of large enterprises, the growing frequency of cyber-attacks, the increasing number of hosted servers, and the rise in the number of cases against companies indulging in data theft. Also, the headquarters and operations of many small cloud security providers (in addition to the big security providers) are based in the Americas, particularly the U.S. Another reason for the dominance of the Americas in the Global Cloud Security Software market is the presence of CSPs such as Amazon and Google.

The Americas is currently witnessing a growth rate of over 30 percent on the cloud security front, which is expected to improve to over 50 percent by the end of 2014. The Americas is expected to dominate the Global Cloud Security Software market till 2014.

Exhibit 3: Global Cloud Security Software Market by Geographic Segmentation 2010



Source: TechNavio Analysis

The EMEA region follows the Americas, with a market share of 38 percent. In the EMEA region, Western Europe is the major contributor; countries such as the U.K., France, and Germany are

among the major users of cloud security solutions. The major countries from the EU region such as the U.K. and France are the most common targets of cyber-attacks; hence, they are generally the most prominent users of cloud security solutions. Further, the presence of some large banking, financial services, and healthcare companies is another reason for the high adoption of cloud security software by the EU.

The APAC region follows the EMEA region with a market share of 18 percent. Though the contribution from the APAC region is currently low (the region is witnessing a comparatively lower growth rate of less than 15 percent), the growth rate is expected to increase by the end of 2014. In the APAC region, countries such as Japan, China, and Australia are among the prominent users of cloud security solutions. However, the Cloud Security Software market in the APAC region also faces some challenges because some of the developing countries in the region still have low knowledge about cloud security solutions and the risks of reliance on cloud services. However, because companies are now spreading throughout the APAC region, developing countries are increasingly adopting the cloud model.

## End-User Segmentation

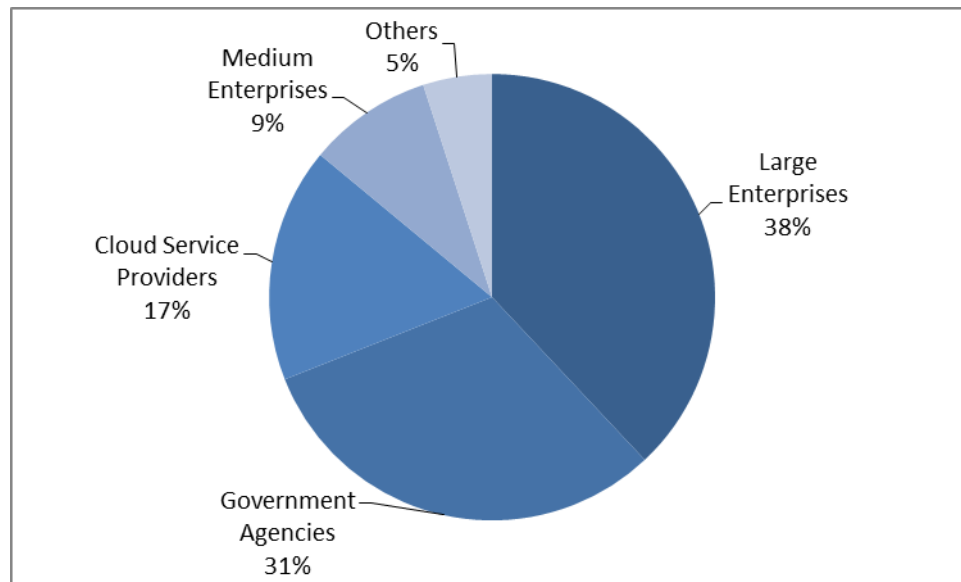
The major end-user of the Global Cloud Security Software is the Large Enterprises segment. (Note that for the purposes of this report, large enterprises are defined as companies with geographically spread out operations, earning revenue of more than US\$100 million per annum, and having a diversified customer network). This segment occupies 38 percent of the Global Cloud Security Software market. Companies from sectors such as Financial Services, Healthcare, Retail, and Manufacturing fall under the Large Enterprises segment. These companies are among the most frequently attacked companies; hence, they are rapidly adopting cloud security solutions.

The Government Agencies segment follows Large Enterprises with a market share of 31 percent and is expected to witness strong growth in the future. This segment is one of the biggest and most aggressive adopters of cloud services. The Government Agencies segment is one of the most frequently attacked and because these agencies have critical information, they need proactive protection when storing information in the cloud. The U.S. Government and the governments of the EU and Western Europe are expected to be the major adopters of cloud security solutions.

The CSP segment follows Government Agencies with a market share of 17 percent. Some CSPs still do not consider security to be a strong competitive advantage. However, the increase in demand for security from end-users is driving them to integrate security with their services.

Further, the emergence of strong cloud security regulations and guidelines is expected to compel cloud security providers to integrate cloud security with their services.

Exhibit 4: Global Cloud Security Software Market by End-user Segmentation 2010

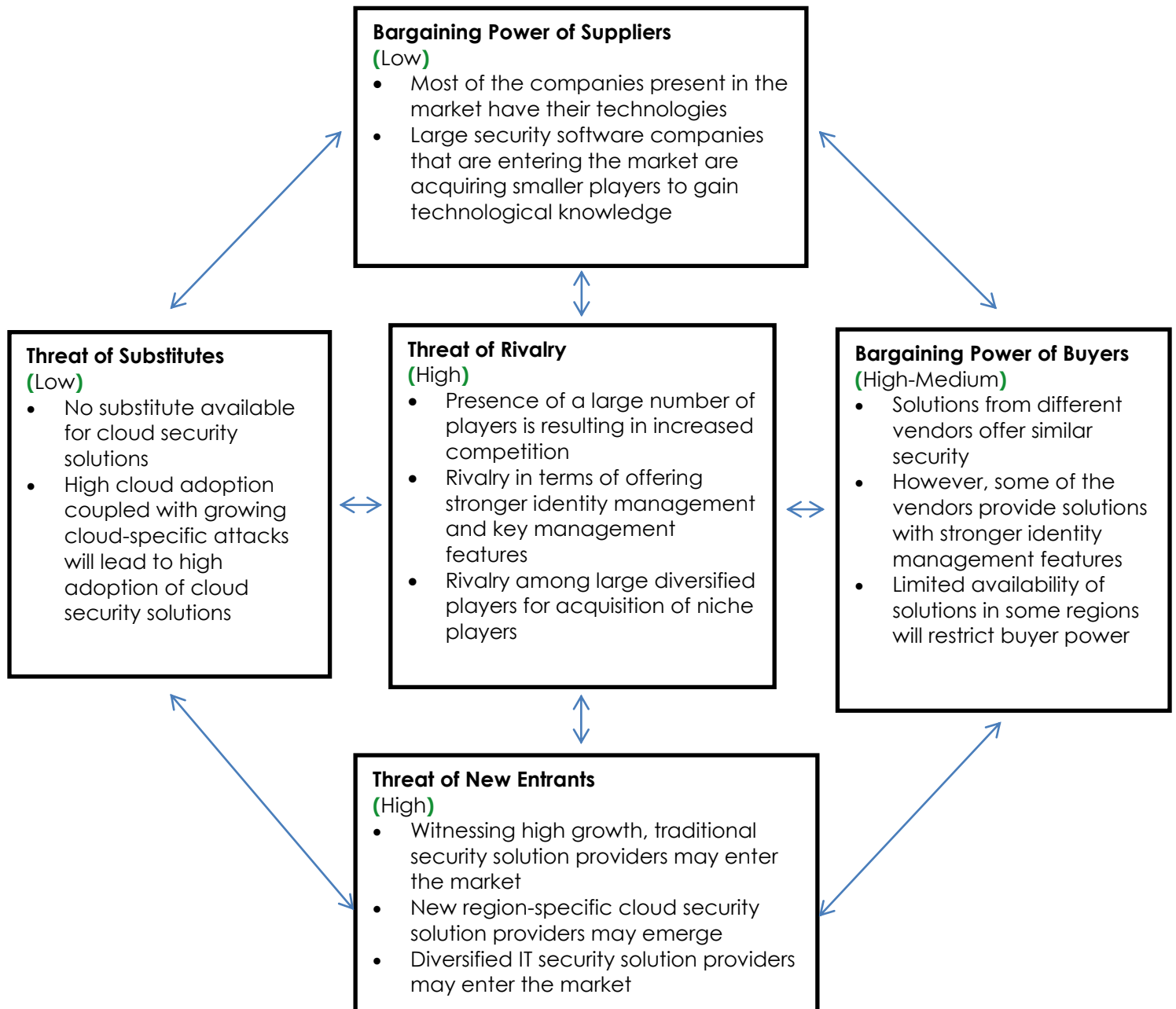


Source: TechNavio Analysis

The Medium-sized Enterprises segment follows CSPs with a market share of 9 percent. (Note that for the purposes of this report, medium-sized enterprises are defined as companies that have revenue of less than US\$100 million per annum, fairly diversified geographic operations, and a strong customer base, but most of the time they do not have a presence in multiple markets). Though medium-sized enterprises were initially slow to adopt cloud security solutions, the availability of small and medium-sized business (SMB)-specific security solutions from cloud security vendors has increased the adoption rate of cloud security solutions among medium-sized enterprises. Among medium-sized enterprises, the most prominent adopters are companies from the Financial Services, Healthcare, Retail, and Technology sectors.

The rest of the market at 5 percent comprises end-users such as small enterprises, non-profits, and educational providers. Though cloud security software vendors are introducing SMB-specific solutions, the slow adoption of cloud services among small businesses is hampering the growth of the Global Cloud Security Software market.

## Five Forces Analysis



## 05. Vendor Landscape

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The Global Cloud Security Software market is very fragmented with the presence of many large traditional IT security solution providers, diversified IT vendors, and pure-play cloud security players. Though different players are present in the market, the market leaders are the traditional security solution providers.

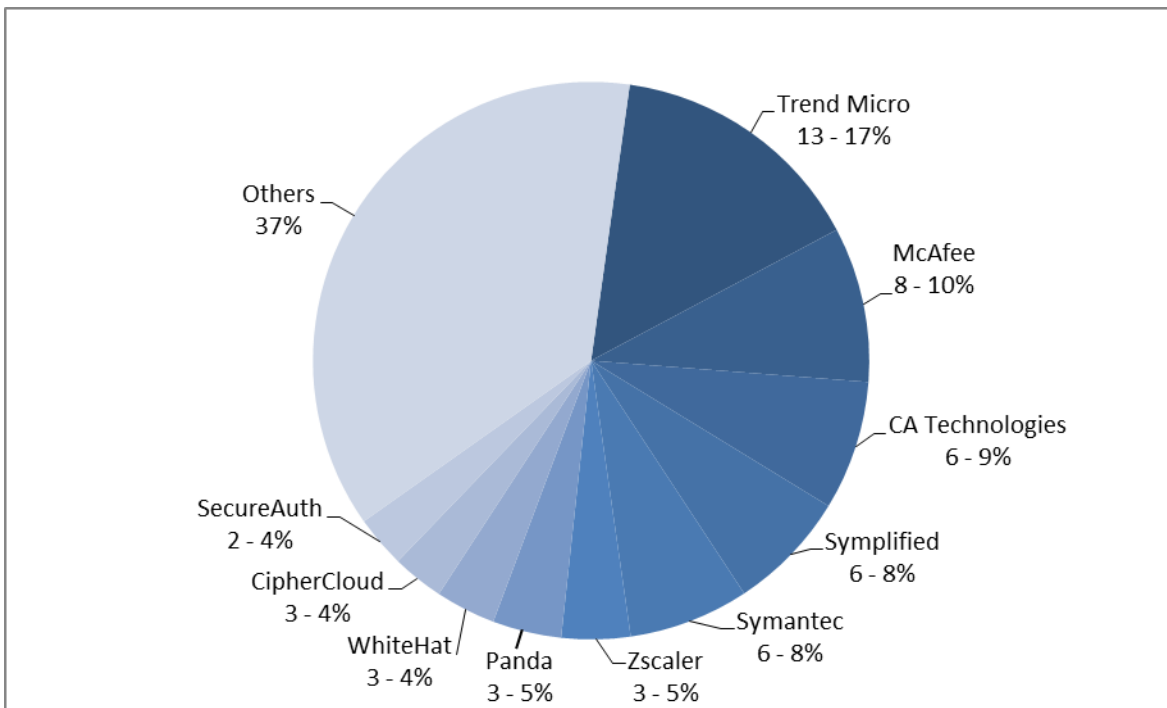
The vendors operating in the Global Cloud Security Software market can be categorized into:

- **Pure-play cloud security vendors:** These vendors do not have operations in other IT security verticals and are characterized by patented security solutions, specifically for cloud-based services. Most of these vendors have technologically superior products; however, they are pegged with issues such as limited geographic reach. Also, since most of these companies are rather new start-ups compared to the traditional players, they do not have well-established customer bases like the traditional players. Players such as Zscaler Inc., Symplified Inc., CloudPassage Inc., and Dome9 Security fall into the category of pure-play cloud security software vendors.
- **Traditional security solution providers:** These companies have a large existing presence in the IT Security market; they have wide geographic coverage and established customer bases. These companies have successfully leveraged their brand name and have attained strong positions in this market. Also, these players have the ability to quickly enter new markets because of their existing partnership networks. Companies such as Trend Micro Inc., McAfee Inc, Symantec, and CA Technologies fall into this category.
- **Diversified IT vendors:** The companies in this category are generally the largest in terms of total revenue. These companies have diversified operations and cater to a much more diversified range of end-users. Further, these companies have a long list of technology and reseller partner networks that help them spread further. Also, these companies are generally characterized by their acquisitiveness. Since these companies may not have expertise in the niche security space, they tend to acquire smaller companies to gain entry into the market and eventually gain market share. Companies such as IBM and Novell fall into this category.
- **Specialized IT security vendors:** These companies, most of the time, are small players focused on a specific segment such as Identity Management, Encryption, or Authentication, which makes them niche players in their respective areas. Though these players have a limited geographic presence, they have an established customer base in their respective areas. These companies may also have a superior technological advantage. However, their inexperience in other IT security verticals sometimes proves to be a problem in enterprise-wide adoption. Companies such as SecureAuth, ThreatMetrix, and WhiteHat Security (WhiteHat Security is specialized in website risk management) fall into this category.

Another class of vendors are CSPs. Since cloud security is expected to become an integral part of cloud services, and cloud users may look for cloud security as a core buying criterion, CSPs are expected to incorporate cloud security as a core offering. Vendors such as NaviSite, Rackspace, Savvis, and Terremark are already building security into their infrastructure to offer it as a part of their services.

The major player in the Global Cloud Security Software market is Trend Micro with a market share in the range of 13 to 17 percent. Trend Micro is able to dominate the market because of its diversified geographic reach, established customer base, and brand reputation. Further, the company has a partnership network with cloud and virtualization service provider, VMware, which has helped it gain market share. Trend Micro also has partnerships with companies such as HP, Cisco, Dell, Microsoft Corp., Oracle, and Wipro.

Exhibit 5: Global Cloud Security Software Market by Vendor Segmentation 2010



Source: TechNavio Analysis

McAfee follows Trend Micro with a market share in the range of 8 to 10 percent. Similar to Trend Micro, McAfee's software has advantages such as account de-provisioning, fine granular authorization features, and auto-synchronization of identity data between enterprise and cloud applications for change management scenarios. Further, McAfee has a vast partnership



network list and serves a range of sectors such as Financial Services, Retail, Healthcare, Government, and Technology.

CA Technologies follows McAfee with a market share of 6 to 9 percent. CA also has a long list of partners such as Accenture, Cognizant, Fujitsu, IBM, HP, Infosys, and Wipro. Further, the company acquired Arcot in October 2010, which has provided it with an advanced authentication technology. Further, the solution provides strong Privileged User and Password Management (PUPM).

Symplified follows CA Technologies with a market share of 6 to 8 percent. Apart from CSPs, the company serves industries such as Energy and Utilities, Financial Services, Healthcare, High Tech, and Life Sciences. The company has recently introduced Symplified Mobile Edition, a solution that secures cloud and web applications on any mobile device. The solution supports many mobile operating systems and is expected to help the company to gain market share.

Some of the other companies with significant market share in this fragmented Global Cloud Security Software market are Symantec (with a share in the range of 6 to 8 percent), Zscaler (at 3 to 5 percent), Panda Security (at 3 to 5 percent), WhiteHat (at 3 to 4 percent), CipherCloud (at 2 to 4 percent), and SecureAuth (at 2 to 4 percent).

The rest of the market at 37 percent comprises some large players and many smaller players, pure-play or cloud security-focused vendors such as Okta, CREDANT Technologies, GuardTime, Awareness Technologies, HyTrust, and Vyatta.

Some of the players in the Global Cloud Security Software market are:

Company	Category
<b>Trend Micro</b>	Global security solution provider with cloud security solution offerings
<b>McAfee</b>	Global security solution provider with cloud security solution offerings
<b>CA Technologies</b>	Global security solution provider with cloud security solution offerings
<b>Symplified</b>	Cloud security solution provider
<b>Symantec</b>	Global security solution provider with cloud security solution offerings
<b>Zscaler</b>	SaaS-based and cloud security solution provider
<b>Panda Security</b>	SaaS-based and cloud security solution provider
<b>WhiteHat</b>	Global web application and online security provider with cloud security solution

<b>CipherCloud</b>	Cloud security solution provider
<b>SecureAuth</b>	Authentication and cloud security authentication solution provider
<b>CloudPassage</b>	SaaS-based solution provider for securing cloud servers
<b>Dome9 Security</b>	Secure multi-platform server firewall management as a service provider
<b>IBM</b>	Global diversified IT vendor with strong footprint in the IT Security market
<b>Novell</b>	Global diversified IT vendor with cloud security solution
<b>ThreatMetrix</b>	Online fraud prevention and device identification solution provider
<b>Okta</b>	On-demand identity and access management for cloud/SaaS applications provider
<b>CREDANT Technologies</b>	Data protection solution provider with cloud security offering
<b>GuardTime</b>	Authentication solution provider through keyless signatures
<b>Awareness Technologies</b>	Monitoring solution provider with cloud security as an offering
<b>HyTrust</b>	Virtualization security and compliance solutions provider
<b>Vyatta</b>	Network virtualization and security appliance provider with cloud security offering
<b>StillSecure</b>	Network security software, web security, intrusion detection system, network access control, and managed security services provider
<b>SafeNet</b>	Encryption solution provider with cloud security offering
<b>ProofPoint</b>	SaaS and on-premises email security, email archiving, and data loss prevention solutions provider
<b>CommTouch</b>	Internet security solution provider with cloud security offering

## 06. Buying Criteria

Parameters	Details	End-users	Significance Attached
<b>Overall Security Provided</b>	Overall strength of the security solution, providing security to the cloud services: data security, application security, IAM, etc.	Large Enterprises	High
		Government	High
		CSPs	High
		Medium-sized Enterprises	High
<b>Suite of Security Solutions Offered</b>	Different security solutions offered: encryption, identity management, access control, application security, etc.	Large Enterprises	High
		Government	Medium
		CSPs	High
		Medium-sized Enterprises	Medium
<b>Encryption Key Management Features</b>	Security encryption key management and storage options available	Large Enterprises	Medium
		Government	Medium
		CSPs	Medium
		Medium-sized Enterprises	Low
<b>Deployment Options (On-premises and Hosted)</b>	Deployment options available with the solution: on-premises, hosted, hybrid	Large Enterprises	Medium
		Government	Low
		CSPs	Low
		Medium-sized Enterprises	High
<b>Initial Deployment Cost and Total Cost of Ownership</b>	Initial cost of purchase, service, maintenance and other related costs associated with the solution	Large Enterprises	Low
		Government	Medium
		CSPs	Low
		Medium-sized Enterprises	High
<b>Availability of Fine Granular Control</b>	Granular control provides detailed policy-based approach and allows for de-provisioning and finer access control	Large Enterprises	Medium
		Government	Low
		CSPs	Medium
		Medium-sized Enterprises	Low
<b>Scalability and</b>	Ability of the solution to work	Large Enterprises	Medium

<b>Integration Ability</b>	under increasing work pressure; ability of the solution to interoperate with cloud services from other providers	Government	Medium
		CSPs	Medium
		Medium-sized Enterprises	Low
<b>Ease of use</b>	Simple installation, usage, and operation of the solution	Large Enterprises	Low
		Government	Low
		CSPs	Medium
		Medium-sized Enterprises	High

## 07. Market Growth Drivers

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The main drivers for the Global Cloud Security Software market are the growing use of cloud services for critical data storage and the sudden increase in cloud-specific attacks. Driven by multiple factors such as flexibility, cost saving, and availability, an increasing number of companies are transferring their data to the cloud. However, this is also exposing these companies to various risks associated with cloud computing. Some of the other drivers for this market are the increasing use of cloud-based services in non-traditional sectors and the rise in employee mobility.

The major drivers for the Global Cloud Security Software market are as follows:

- Increasing Usage of Cloud Services in Non-traditional Sectors
- Growing Adoption of Cloud Services in Government Departments
- Rise in Cloud Service-specific Attacks
- Growing Usage of Cloud Services for Critical Data Storage
- Rise in Employee Mobility

### **Increasing Usage of Cloud Services in Non-traditional Sectors**

Cloud-based services are increasingly being used in non-traditional sectors such as Online Gaming, Online Music Stores, and Social Networking because of their advantages such as unlimited storage, ease of use, and easy sharing. These non-traditional sectors are witnessing very high growth, sometimes year-over-year growth of over 50 percent. Further, these non-traditional sectors are not simple websites but complex programs. For example, social networking websites such as Facebook, the online music sharing space SoundCloud, and many online gaming websites are not simple websites, they are complex information-sharing and hosting spaces. Many users of these sites are not aware of the impending threats of dependence on the cloud, nor of the increasing cases of identity theft. Hence, the growing use of these websites coupled with the growing number of identity theft cases is driving many companies to adopt cloud security software solutions.

### **Growing Adoption of Cloud Services in Government Departments**

Another driver of the Global Cloud Security Software market is the growing adoption of cloud services by government departments. Owing to the increase in data and growing flexibility needs, various government departments such as Defense, Intelligence, and Finance are adopting cloud services. Also, the increasing mobility of government employees and the growing requirement for centralization of storage and other services is driving various

government departments to adopt cloud services. Further, the ever-increasing attacks on government installations are prompting government agencies to adopt cloud security solutions. The U.S. Government is one of the major consumers of cloud security solutions.

## **Rise in Cloud Service-specific Attacks**

Another reason for adopting cloud security solutions is the sudden increase in cloud-specific attacks. One of the primary reasons for such attacks is the growing use of cloud-based services and users' willingness to reveal personal information. This compromises the users' information; thus, giving rise to identity theft cases. Some of the recent examples of cloud-specific attacks are the attacks on Amazon services in April 2011, which saw a prolonged outage of Amazon services, and the breach of email marketing provider, Epsilon in late March 2011, which saw many companies, including large enterprises such as investment banks, being affected. The rise in cloud-specific attacks is further fuelled by the absence of strict guidelines and regulations for CSPs. Thus, the growing number of attacks on cloud-based services is driving many companies to adopt cloud security software solutions.

## **Growing Usage of Cloud Services for Critical Data Storage**

Cloud-based services have many advantages over traditional services when it comes to storage. Some of the advantages are ease of upgradation, seamless integration, anywhere availability, and ease of access and use. Given the multiple advantages of cloud storage over traditional storage, most of the large enterprises, which have geographically widespread operations, are opting for cloud storage services. Further, companies from sectors such as Insurance, Banking, Healthcare, and E-commerce are very dependent on their websites and online services, and are geographically spread out. Hence, they tend to adopt cloud storage services to improve their productivity as well as to cut costs. Companies from such sectors also have to comply with strict regulations and are the target of data theft, which can result in hefty penalties, reputation loss, and customer loss. Thus, to balance migration to cloud storage with adequate security, these companies are adopting cloud security solutions.

## **Rise in Employee Mobility**

With companies geographically spreading their operations, employee mobility is at an all-time high. Employees from some companies, especially from sectors such as Healthcare, Construction, and Insurance and Investment Banking, are usually on the move. This compels their companies to provide access to email, databases, storage, etc., through the cloud. However, while providing these services and access to their networks through the cloud, companies have to be extra cautious about security. This is because access to their servers is from outside their network perimeter and traditional security solutions cannot provide sufficient

security. Hence, growing employee mobility is driving companies to adopt cloud security solutions.

## 08. Drivers and their Impact

Drivers	Impact on End-user Category			
	Large Enterprises	Government	CSPs	Medium Enterprises
<b>Increasing Usage of Cloud Services in Non-traditional Sectors</b>	Medium	Low	Low	Low
<b>Growing Adoption of Cloud Services in Government Departments</b>	Low	High	Medium	Low
<b>Rise in Cloud Service-specific Attacks</b>	High	Medium	High	High
<b>Growing Usage of Cloud Services for Critical Data Storage</b>	High	High	High	Medium
<b>Rise in Employee Mobility</b>	Medium	Low	Medium	Low

Drivers	Impact on Geographic Category		
	The Americas	EMEA	APAC
<b>Increasing Usage of Cloud Services in Non-traditional Sectors</b>	High	Medium	Low
<b>Growing Adoption of Cloud Services in Government Departments</b>	High	High	Medium
<b>Rise in Cloud Service-specific Attacks</b>	High	High	High
<b>Growing Usage of Cloud Services for Critical Data Storage</b>	High	High	High
<b>Rise in Employee Mobility</b>	Medium	Medium	Low



## 09. Market Challenges

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Despite strong growth drivers and interesting trends, the Global Cloud Security Software market is pegged with some growth inhibitors. Some CSPs still believe that cloud security is the end-users' responsibility, and security is not a strong buying criterion for end-users. Hence, providers shy away from offering cloud security. Another major issue is the lack of awareness amongst end-users about the risks associated with cloud computing. Other challenges are inconsistent network connections and lack of proper cloud security standards.

The major challenges facing the Global Cloud Security Software market are as follows:

- CSPs belief that Security is End-users' Issue
- Lack of Awareness About Cloud Security
- Inconsistent Network Connection Issues
- Lack of Proper Cloud Security Standards

### **CSPs Belief that Security is End-users' Issue**

Some CSPs are still skeptical about investing in cloud security. They believe that security is the end-users' concern, and many end-users do not expect CSPs to offer security with their services. This makes CSPs believe that security is not a competitive advantage, nor is it a strong buying criterion for customers. Further, some CSPs, such as those providing a single cloud-based application, are still not interested in investing in cloud security. The attitude of CSPs is hindering the adoption of cloud security solutions.

### **Lack of Awareness About Cloud Security**

Though there has been an increase in the adoption of cloud computing, awareness about the potential risks associated with cloud computing is still very low. Many end-users still believe that traditional security solutions are sufficient to protect their networks. This issue is more prominent in developing regions where enterprises are skeptical about spending more for IT security. Further, many end-users from non-traditional industries are not aware of the security risks posed by cloud adoption. This means that enterprises do not adopt cloud security solutions.

### **Inconsistent Network Connection Issues**

Since the effects of cloud security solutions are based on the availability/quality of the network connection, one of the major requirements for efficient performance of cloud security solutions is a strong and robust network connection. However, some of the developing regions and even some parts of the developed regions are still pegged with slow and inconsistent network connections. The issue of availability of proper network connections is expected to result in

cloud services and applications being unprotected. Also, slow network connections are expected to result in time lag/latency issues that may delay security scanning and other processes. Thus, despite the technological advances of cloud security solutions, cloud security solutions are still pegged with latency issues.

### **Lack of Proper Cloud Security Standards**

Another issue faced by end-users in the Global Cloud Security Software market is the lack of established cloud security standards. The unavailability of cloud security standards is creating confusion among end-users, which is affecting the adoption rate of cloud security software. Further, since the awareness of cloud security is low, the lack of standards means that end-users continue to rely on their existing solutions. In addition, because cloud security is a new developing market, the service level agreements (SLAs) between security providers and end-users do not sufficiently cover all aspects of security.

## 10. Market Trends

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The major trend in the market is the emergence of cloud service-specific security solution providers. Another major trend in the market is that identity management and encryption are expected to remain the top cloud security solutions. Some of the other trends are the increasing partnerships between CSPs and security solution providers, the increasing availability of cloud security solutions for SMBs, and the emergence of strong cloud security standards.

The major trends for the Global Cloud Security Software market are as follows:

- Increasing Partnerships Between CSPs and Security Solution Providers Expected
- Increasing Emergence of Cloud Service-specific Security Solution Providers
- Identity Management and Encryption to Remain the Top Cloud Security Solutions Offered
- Increasing Availability of Cloud Security Solutions for SMBs
- Emergence of Strong Cloud Security Standard and Guidelines

### **Increasing Partnerships Between CSPs and Security Solution Providers Expected**

It is expected that CSPs will increasingly form partnerships with security solutions providers as the Global Cloud Security Software market matures. Further, with market maturity, cloud security will become an integral part of cloud services. Thus, a CSP will be compelled to provide cloud security along with cloud services. In addition, it is also expected that CSPs will enter into partnerships for value-added security services that will work as differentiators in cloud adoption. The increasing frequency of cloud-specific attacks will give rise to further value-added security. Thus, over a period of time, cloud security is expected to become a major buying criterion for customers. This trend of partnership between CSPs and security solution providers is already visible in the market.

Security solution provider, Trend Micro, entered into a global alliance with cloud and virtualization service provider, VMware, in 2010. Similarly, Cloud.com, a provider of open source cloud computing solutions, entered into a partnership with Symplified, a cloud security company, in 2011, to provide service providers with Single Sign-on (SSO) capabilities.

### **Increasing Emergence of Cloud Service-specific Security Solution Providers**

The Global Cloud Security Software market is witnessing the emergence of cloud service-specific security solution providers such as Symplified, Zscaler, and CREDANT Technologies. These companies are recent start-ups compared to the traditional security software providers in the market such as Trend Micro, McAfee, Symantec, and CA Technologies. However, the strong and

fast revenue growth of these companies is expected to encourage other companies to enter the Global Cloud Security Software market. Companies such as Symplified and CREDANT Technologies experienced growth of more than 300 percent in 2010, compared to 2009. Further, a strong shift toward cloud-based services is expected to provide a further boost to these pure-play companies.

### **Identity Management and Encryption to Remain the Top Cloud Security Solutions Offered**

Currently, the Identity Management and Encryption segments dominate the Global Cloud Security Software market, at around 40 percent. The growing access to secure networks through the cloud and the growing criticality of data in the cloud will allow the Identity Management and Encryption segments to remain the major growth drivers of this market. Further, the growing number of cases of identity theft is expected to prompt cloud users to adopt identity management and access control solutions. Other cloud security segments that are expected to witness growth in the adoption of cloud security are Data Security, Cloud Governance, Application Security, and Operational Security.

### **Increasing Availability of Cloud Security Solutions for SMBs**

The growing needs for cost cutting and flexibility are compelling many SMBs to adopt cloud security solutions. Cloud adoption among SMBs doubled in 2010, with the adoption rate increasing to more than 20 percent. Further, by the end of 2012, the percentage of SMBs that have adopted cloud services is expected to be 50 percent, i.e., half of all SMBs are expected to have cloud-based services. Hence, the leading vendors are introducing SMB-specific cloud security solutions in the market.

Witnessing the growing demand from SMBs, companies such as Zscaler and Panda Security are offering SMB-specific cloud security solutions. Also, TDi Technologies, a provider of IT management and IT infrastructure improvement services, is providing cloud security services to SMB healthcare providers.

### **Emergence of Strong Cloud Security Standard and Guidelines**

With cloud security becoming an integral part of cloud adoption, the Global Cloud Security Software market is witnessing the emergence of strong cloud security standards and guidelines. Based on these guidelines, customers will be able to determine how secure their data is. It is expected that cloud users will continue to evaluate their cloud providers on the basis of their existing processes and evaluation parameters. However, users are expected to place more stress on the need for some standard evaluation parameters that they can rely on when selecting a security/cloud provider. Further, since cloud security is a new market, the SLAs do not

sufficiently cover all aspects of cloud security. Thus, a strong demand from end-users for more detailed and concrete assurances of operational practices is resulting in the emergence of strong cloud security standards and guidelines.

## 11. Key Vendor Analysis

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### 11.1 Trend Micro Inc.

#### Business Overview

Trend Micro Inc. is a major security solutions provider. The company was incorporated in 1988, is listed on the Tokyo Stock Exchange, and is headquartered in Tokyo, Japan. It has offices in North America, Latin America, the EMEA region, and the APAC region. It has operations in 23 countries around the world. The company serves sectors such as Manufacturing, Healthcare, Education, Financial, Food and Services, Retail, Engineering, Human Capital Management, Government, and Telecommunications Services. The company segments in the sectors it serves are Home and Home Office, Small Businesses, Medium-sized Businesses, Enterprises, and Service Providers. It has a strong partnership network and in its partnership ecosystem Trend Micro includes consulting and service partners, managed services and hosting partners, platform partners, technology partners, and channel partners/resellers. Trend Micro had 4,434 employees in 2010.

The company reported revenue of US\$1.085 billion in FY2010. The company draws more than 60 percent of its revenue from business customers and the rest from individual consumers. The company drew 41 percent of its revenue from Japan in FY2010. North America accounted for 26 percent; Europe, 21 percent; the APAC region (other than Japan), 9 percent; and Latin America, 3 percent. However, revenue from the Cloud Security segment was only around US\$30 million. The majority of the cloud security revenue is expected to come from the Americas and the Europe region.

## SWOT Analysis

<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• The company is the leader in both the Cloud Security and Virtualization Security markets</li> <li>• Its solutions provide granular fine detailed control, providing a policy-based approach to key management and data access</li> <li>• The solution provides the option of physical storage of keys away from the CSP. This helps in better control and may significantly reduce data theft cases</li> <li>• The company also provides hosted key management that offloads in-house support teams and self-supporting enterprise customers</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>• The company's overall revenue growth was slow at only 5.4 percent from FY2009 to FY2010, whereas the Global Security Software market witnessed a growth of around 15 percent during the same period</li> <li>• It draws the majority of its revenue, at 41 percent from Japan; thus, it has a geographic diversification risk</li> <li>• The solutions provided by some of the pure-play companies are stronger, especially in the IAM space</li> </ul>
<p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>• The company has partnerships with leading IT organizations such as HP, Cisco, Dell, Microsoft Corp., Oracle, and Wipro, which can be leveraged to expand its operations</li> <li>• It has released cloud security products for SMBs which are expected to be strong adopters of cloud security</li> </ul>	<p><b>Threats:</b></p> <ul style="list-style-type: none"> <li>• Though VMware is currently a partner, VMware may enter the market by developing security technologies of its own</li> <li>• Threat from pure-play cloud security vendors because they are experiencing strong and impressive growth</li> </ul>

## 11.2 McAfee Inc.

### Business Overview

McAfee Inc., founded in 1987, is a leading provider of network security solutions. The company is listed on the New York Stock Exchange and is based in California, US. The company has categorized its geographic operations into five segments: North America; the EMEA region; the APAC region excluding Japan; Japan; and Latin America. The company's security products are for sectors such as Data Protection, Email and Web Security, Endpoint Protection, Mobile Security, Network Security, Risk and Compliance, Security Software as a Service (Security SaaS), and Security Management. McAfee serves a diversified range of industries such as Financial Services, Retail, Healthcare, Government, and Technology as well as individual consumers. As of December 2010, the company had 6,300 employees, with approximately 48 percent of the employees being in the U.S.

In FY2010, the company reported total revenue of US\$2.1 billion. Product revenue was US\$225.4 million, whereas services revenue was US\$1.8 billion. North America contributed the maximum, 58 percent, to revenue. The EMEA region followed with 26 percent. Japan came next at 7 percent, and the APAC region and Latin America contributed 6 percent and 4 percent, respectively. However, in FY2010, the revenue from the Cloud Security segment was low, at only around US\$25 million.



## SWOT Analysis

**Strengths:**

- The company's cloud access control solution allows control over the entire lifecycle of cloud access security, providing technologies and solutions such as SSO, provisioning, strong authentication, authorization, and audit
- Its cloud security solution allows account de-provisioning and fine granular authorization
- Its solution helps in auto-synchronization of identity data between enterprise and cloud applications for change management scenarios
- Centralized management and reporting are provided through integration with the McAfee ePolicy Orchestrator platform

**Weaknesses:**

- Despite being an established traditional security solution provider with a wide geographic presence, the company is slow to gain share in the cloud security space
- Some pure-play companies such as Symplified are witnessing much higher growth in the Cloud Identity Management market
- Some of its competitors, such as Trend Micro, provides better key management options/features

**Opportunities:**

- The company has a very long list of partners from various geographic locations, which it can leverage to expand
- It recently launched its cloud security platform, which secures all content and data traffic including email, web and identity traffic; thus, providing a unified solution

**Threats:**

- Threat from pure-play vendors such as Zscaler and Symplified that have high growth rates
- Threat to its market share from other traditional security solution providers that are expected to aggressively push for expansion in this market

### 11.3 CA Technologies

#### Business Overview

CA Technologies is one of the leading independent software corporations in the world and is headquartered in Islander, New York, US. Apart from its headquarters in New York, the company has offices in multiple geographic locations, including many locations in the US. The company was incorporated in 1974 and began its operations in 1976. The company completed its initial public offering of common stock in 1981. CA's main area of expertise is in providing anti-virus and internet security programs. Over the years, the company has also been recognized for its mainframe computer and distributed computing applications and solutions. Its applications and solutions serve major Forbes Global 2000 companies. The company has technology alliances with other players such as VMware, Salesforce.com, Microsoft Corp., Cisco, and SAP. Further, CA has partnerships with companies such as Accenture, Cognizant, Fujitsu, IBM, HP, Infosys, and Wipro. As at March 2011, the company had 13,400 employees.

In FY2011, the company reported total revenue of US\$4.4 billion, which was a 5 percent growth on the revenue of FY2010. Subscription and maintenance revenue constituted the major portion of the revenue at US\$3.8 billion. Professional services revenue was only US\$327 million, whereas software fees and others revenue was valued at US\$280 million. The majority of the revenue, at 57 percent, came from the US, while the remaining 43 percent was from international markets.

The revenue from cloud security is expected to be low, at a few million US dollars only. The majority of cloud security revenue is expected to come from the Americas and Europe.

## SWOT Analysis

**Strengths:**

- The company acquired Arcot in October 2010, which has provided it with a stronger advanced authentication technology
- CA Federation Manager extends the capabilities of CA SiteMinder to standards-based federated partner relationships, which enables a cloud service to interoperate with applications in other cloud services such as Salesforce.com and Google Applications
- CA Access Control provides granular entitlements and facilitates improved compliance through granularity of policy-based access control and enforcement that includes segregation of duties
- The cloud security solution provides strong PUPM

**Weaknesses:**

- The company draws the majority of its revenue from the US (more than 50 percent of total revenue); thus, it has a geographic diversification risk
- Its overall revenue increased by only 5 percent from FY2009 to FY2010, which is much less than the overall growth of the Global Security market
- Despite having a strong identity and an access control product, the solutions from some of its competitors fare slightly better on the identity management features front

**Opportunities:**

- The company has technology alliances with VMware, Salesforce.com, and Microsoft Corp., which it can leverage to spread its cloud security solutions
- It has partnerships with SOASTA, a provider of an on-demand cloud testing (load testing) solution and with Armada Group, a provider of cloud computing and virtualization professional services to growing enterprise customers

**Threats:**

- Threat from other traditional security solution providers that may enter the market
- Threat from pure-play players such as Zscaler, Symplified, and CipherCloud that have high growth rates

**11.4 Symplified Inc.****Business Overview**

Symplified Inc., founded in 2006 and based in the US, is a leading cloud identity management provider. The company serves industries such as Cloud Providers, Energy and Utilities, Financial Services, Healthcare, High Tech, and Life Sciences. The company categorizes its solutions into access control, authentication, audit and provisioning, and administration. It provides solutions such as Symplified Access Manager, Symplified Identity Manager, Symplified Sign-On, and Symplified SinglePoint Platform-as-a-Service (PaaS). Symplified has a strong list of technology and channel partners. It has technology partners such as Amazon Web Services, Digipass, Google, Salesforce.com, Taleo, and Vasco. Further, the company has channel partners such as Cloud.com, Cloud Distribution, Computer Sciences Corporation (CSC), Kumoya Inc., and Wipro Technologies.

Symplified is a private company and does not report its revenue. However, the revenue from cloud security is expected to be in the few million US dollars only. The major contribution is expected to come from the Americas. It is believed that the company draws the majority of its revenue from its Product segment.

## SWOT Analysis

<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• The company is the market share leader in the cloud identity management space</li> <li>• Its solution provides SSO and policy enforcement through any destination, irrespective of the end-users's device</li> <li>• Its solution supports different smartphone operating systems such as iOS, Android, and BlackBerry, supports tablets such as iPad, Motorola Xoom, and Samsung Galaxy, and integrates with Virtual Private Networks (VPNs) from Juniper, Cisco, and others</li> <li>• It has a much stronger and better cloud security solutions, purposely built for specific cloud architectures</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>• While the company is strong in the cloud identity management space, it is not as strong in other spaces such as application security, encryption, and access control</li> <li>• It has limited geographic presence and draws the majority of its revenue from the Americas</li> <li>• It is a relatively new start-up and does not have the established customer base that the traditional security solution vendors enjoy</li> </ul>
<p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>• The company can enter into more reseller and partnership agreements to expand its presence in other geographic locations</li> <li>• It has recently introduced Simplified Mobile Edition that secures cloud and web applications on any mobile device, which will help it to expand further</li> <li>• It has partners such as Amazon Web Services, Google, Salesforce.com, Cloud.com, and Wipro, that can be leveraged to expand further</li> </ul>	<p><b>Threats:</b></p> <ul style="list-style-type: none"> <li>• Threat from other players that are strong in the access control, data security, and encryption spaces and that may therefore have strong growth rates</li> <li>• Threat from bigger traditional players that have better geographic reach and which may therefore expand more quickly</li> </ul>

## 12. Other Reports in this Series

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Global Data Loss Prevention Applications Market 2010–2014

Global Security Software for Consumers Market 2010–2014

Global Email Encryption Market 2010–2014

Global Cloud Email Archiving Market 2010–2014

Global Email Archiving Market 2010–2014

Global Next Generation Firewall Market 2010–2014

Global Data Protection and Recovery Management Market 2010–2014

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