Trend Micro
Consumerization of IT

Managing And Securing Consumerized Enterprise IT

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WHAT IS "CONSUMERIZATION"?

"Consumerization" is now recognized industry-wide as the rampant and inevitable movement of enterprise employees opting to utilize devices and consumer applications of their own choosing on which to conduct company business. These "devices" include smart phones, pads, tablets, mobile devices, and external data plans, and is having an enormous impact on how enterprise IT protects endpoints and secures data.

This clearly ubiquitous trend is quickly transforming the way corporate IT works, and will continue to work moving forward. Although not every enterprise IT manager yet refers to the elements meeting these criteria by the term "Consumerization", most have experienced them and thought about these implications of such widespread use of personal devices in the workplace:

The blurring lines between corporate and personal IT
Most users today have access to powerful computer systems and high-speed internet at home. Further social networking applications such as Facebook, Twitter and FourSquare are part of their everyday lives. So, as technology plays an increasingly important role in everybody's personal life, users are accustomed to the power, and convenience of consumer Web 2.0 applications, flexibility of data exchange with cloud-based storage and Webmail and ubiquitous internet connectivity of consumer devices.

The surge of personal mobile devices
A significantly innovative shift in the landscape of client computing devices accessing IT applications is taking place. The company provided standard business laptop is no longer the gold-standard. Instead users read email – both private and business – on smart phones and mobile devices that access the corporate CRM on tablets, and store corporate data on their non-PC laptops or netbooks. These devices being designed for and marketed primarily to consumers have a much shorter lifecycle, resulting in a significantly higher degree of device churn.

BYOD: Bring Your Own Device
The first signs of enterprises embracing the inevitable, Consumerization of their IT, manifest themselves in the form of Bring-Your-Own-Device programs implemented by some enterprises. The term, coined by gamers attending multiplayer gaming events with their own PCs, screens etc, refers to enterprises not only tolerating the use of personally-owned and user liable devices, but actually encouraging and sponsoring it. With users choosing a device to their liking, sometimes restricted to for example the Windows Operating System, and enterprises providing an allowance or sponsorship for those devices, is often seen as a win-win scenario. The user chooses a device that she/he is also allowed to use for private purposes, and corporate IT defers some of the hardware capital expenditures to the users.

"Webification" of enterprise applications

In an effort of better supporting a mobilized workforce, telecommuting employees and saving cost by embracing Software-as-a-Service offerings, enterprises make applications that used to be limited to internal users accessible on the Web. Web-based CRM systems (think Salesforce.com), employee and manager self-service-portals, Web-access to corporate email, contacts, calendar and task-management are just a few examples.

Changing user expectations – the "Millennial Generation"

Employee expectations of technology have changed over the years, depending on their generation. Older employees have witnessed the slow introduction of technology into the workplace – such as the PC's evolution from DOS to Windows, internal network morphing to become part of the Internet, cell phones, WLAN becoming faster and faster, the Blackberry, and smart phones. They have a more traditional view of the enterprise IT ecosystem, relying much on support, including the help desk, the on-site technician, and applications being installed and maintained for them. Generation X'ers who entered the workforce during the Internet bubble have a different starting point and are better adjusted to the fast pace of technology development. Millenials have grown up amidst consumer technology, playing with toys containing embedded computer chips, essentially making them "Digital Natives". As they now enter the workforce, they require and expect anytime, anywhere access to information, for both personal and business use. In fact, in a recent survey conducted by Trend Micro, almost 45% of the surveyed consumers responded they expect to be using their private smart phone for work too.

CONSUMERIZATION IS REAL

The Consumerization trend – at least the mobilization aspect of it – is clearly reflected in market data. All of 2010 was defined by a series of explosive growths in the smart phone market. But in the fourth quarter of 2010, for the first time ever, smart phones have outsold traditional computers, says IDC.[1] Leading manufacturers posted staggering quarterly and yearly growths with more to come in 2011.

IDC estimates that a record-breaking 92 million computers were shipped in the fourth quarter of 2010. Smart phones achieved nearly 101 million shipments over the same period - an 87% increase compared to Q4 of 2009. Traditional computers still have the lead for the whole year shipments (346.2 million), but smart phones are catching up - 302.6 million were shipped around the world, up 74.4% compared to 2009.
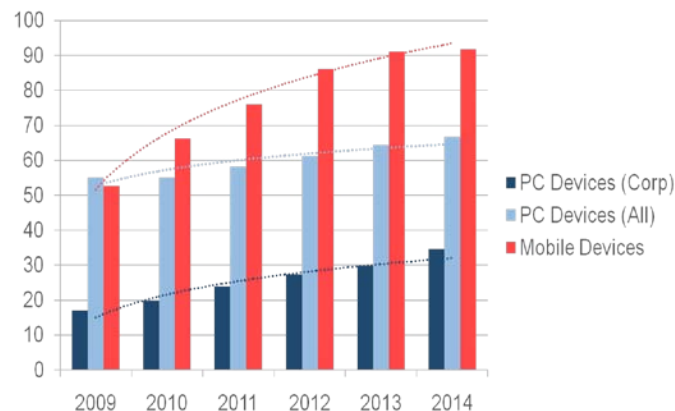
Projected Endpoint Population: Mobile Devices vs. PCs
Source: Trend Micro

Growth in the emerging tablet market is even more impressive with a total of 17 million devices sold in 2010 alone, of which Apple, with the iPad and iPad2, holds almost 75% market share, followed by Android-powered tablets such as the Samsung Galaxy Tab. According to Loren Loverde, vice president, Consumer Device Trackers, shipments are expected to reach roughly 50 million in 2011 and are expected to grow at a similar pace in 2012 and beyond.

EMBRACING CONSUMERIZATION – A CRITICAL BUSINESS DECISION

Realistically, the influence of consumer technologies on each and every enterprises and its workforce is inevitable—and it has some real implications on several aspects, including security and employee satisfaction. Ultimately, as Gartner puts it, this will be "the single most influential trend affecting the technology sector in the coming decade, but the effects are more subtle and broad-reaching than most observers originally imagined, and we have reached a tipping point." [2]
So what enterprises do to actually benefit from Consumerization and make it work to their advantage?

Consumerization enables remote workers to be more productive:
The business benefits of extending enterprise data and applications to mobile workers are already apparent. These benefits include higher productivity, higher customer satisfaction and higher talent retention, to name just a few. Many recent studies from point out that almost half of the U.S. workforce is already mobile and away from the primary work location for more than 20% of the time.
Typologies of mobile workers may include road warriors, field workers, day extenders - checking email from home before going to the office, business travelers, teleworkers and so on. In fact, it is probably fair to say that every worker is already an occasional mobile worker as the traditional boundaries of the office

have blurred into homes, hotels, conference centers, airports, busses, trains, airplanes and many other commercial venues such as coffee shops and malls.

Increasingly, a company's ability to compete depends on enabling these mobile workers so they can be productive wherever they are. In fact, according to a Yankee Group survey, workers say that "working from home is the single most important improvement their organization can make to improve their productivity." [3]

Consumerization empowers communication and customer interaction.

Today, social network activities are a critical element of any successful marketing mix. Vendor-customer interaction on social media covers a broad range from "old-school" product promotion, to blogs, forums, viral videos etc. Embracing today's digital lifestyle in the way you communicate with customers is essential and can root enterprise brands and products much deeper in customer's minds than traditional marketing methods.

Further, as employees and customers are used to communicating on platforms such as Facebook and linked-in and receive real-time information in the form of Tweets and push notifications on their devices, embracing these technologies is critical to not breaking these new, yet established communication channels for business communication.

Consumerization reduces IT operations cost

Embracing the application webification aspect of Consumerization also has the potential to save on both, operations and software license cost – and enabling user productivity on multiple devices. According to CIO magazine Avago, a semiconductor company that moved its employees over to Google Apps has saved $1.6 million a year. In the U.K., not long after implementing Gmail and dropping Exchange, Taylor Woodrow, a construction firm, claims to have saved $2 million. [4]

Consumerization enables attracting and retaining talent

As the "Millennial Generation" enters the workforce, understanding and accommodating the way these young professionals think and work becomes critical to attracting and retaining the desirable hires among them. Millenials grew up in a world that always had the internet and where access to information from anywhere was the rule, not the exception. They usually acquired IT skills as children, making them much more tech-savvy than the generation that preceded them. They usually own powerful personal computing and mobile computing devices and expect – even demand to be able to use these for work-related tasks. Relating back to the social networking aspect above, new entrants into the world of business see the company they work for as their community and the user base of the systems they use in the company as a place to get help, comment or blog on things that are happening, and make friends. It's all social for them.

Putting all of this together makes it clear that there are a number of good reasons to embrace the Consumerization of enterprise IT – especially as the trend is clearly unstoppable at this point. However, doing so does raise a very relevant next question:

HOW TO MANAGE AND SECURE CONSUMERIZATION

IT departments in consumerized environments are faced with a series of challenges, mainly around acquiring visibility and some level of control over the plethora of user-liable devices:

Management of user-liable devices
Management in this case has a dual purpose. For one, it is about making the experience for the user a smooth and easy one, in order to maximize his motivation and productivity. Secondly, getting some level of control over user-liable devices has the intent to minimize the exposure to security risk for all parties, the device, the user and the corporate network – following the idea that a well-managed device is – in most cases – a safer device.

Exposure of sensitive corporate data stored on devices
There are several ways for sensitive corporate data to be exposed to unauthorized third parties. The simplest of cases is when a portable device is lost or stolen – and millions of cell phones and laptops are reported stolen every year. Sensitive data stored on the device must be considered compromised, and depending on the nature of that data, a data breach must be reported to the authorities, resulting in cost of up to $50,000 per exposed device and a loss of reputation.

Leakage of sensitive corporate data through consumer applications
As users use the same device for personal and work-related tasks, sensitive data can easily – with or without malicious intention on the side of the user - be transferred off the device, sent via Webmail, instant messaging or other non-corporate communication channel.

Introduction of malicious data or software
Malware seems an obvious problem as it can be brought into the corporate network in multiple ways. A user-liable device can get infected by simply surfing the Web while being unprotected from Web Threats or by being used in an insecure environment. They can then carry infected data or applications that may compromise the corporate network, leverage corporate servers and machines to attack others (bots) or steal sensitive information. [5]

TREND MICRO CAN HELP

Trend Micro, a global cloud security leader, creates a world safe for exchanging digital information with its Internet content security and threat management solutions for businesses and consumers. A pioneer in server security with over 20 years experience, we deliver top-ranked client, server, and cloud-based security that fits our customers' and partners' needs, stops new threats faster, and protects data in physical, virtualized, and cloud environments. Powered by the Trend Micro™ Smart Protection Network™ infrastructure, our industry-leading cloud-computing security technology, products, and services stop threats where they emerge, on the Internet, and are supported by 1,000+ threat intelligence experts around the globe.

Trend Micro's expertise in securing corporate environments helps you face the challenges of Consumerization.

Mobile Device Management and Security enable the use of smart phones and tablets:
Trend Micro understands that the most secure device is a well-managed device, but that only managing mobile devices in a typical pure-play MDM fashion is not enough. Only the combination of mobile device management and security functionality is capable of effectively enabling you to securely embrace the Consumerization of your mobile IT. And because mobile management and security is integrated into our endpoint security offering, our solution can become your command center for all endpoint related security and management tasks – regardless of whether they are PCs, Laptops, Macs, Smart phones or tablets. Regardless too of whether they run Android, Windows, Symbian, Apple iOS or BlackberryOS.

Lightweight security agents secure user-owned devices with minimal impact:
Users are very sensitive to performance degradation and inadequate use of resources on their endpoints. For PC-type user-owned endpoints, including Macs, Trend Micro has developed security agents that leverage threat intelligence in the cloud rather than from device-side signature files. This eliminates the need for large signature updates and drastically reduces the memory utilization. Trend Micro's endpoint security solutions are proven to use up to 60% less resources and scan over 50% faster than competitor's solution – and that's while delivering up to 50% better overall protection.

Virtualization Intelligence and Cloud Security enable a safe journey to the cloud.
Virtualization of applications and desktops emerges as one of the preferred ways to grant access to corporate resource from any device, anywhere. Trend Micro's solutions are designed to take into consideration the unique requirements for virtualized environments, thus maximizing the performance and ROI of virtualization.
To address privacy concerns when adopting public-cloud computing Trend Micro leads the market with the industry's first solution specifically developed to allow you to control and protect your sensitive corporate data, maximizing the benefits of cloud computing.

Comprehensive data-protection protects your brand and supports compliance:
Trend Micro offers and integrates end-to-end data protection solutions allowing our customers to protect their sensitive data whether in rest, in motion or in use. Content aware endpoint security further limits the risk of data leakage.

Network-layer threat detection lets you see the invisible:
Trend Micro Threat Detection Appliance, available with Threat Management Services provides real-time multi-protocol network-layer detection and mitigation engine that highlights malicious communication patterns and helps you identify rogue, unmanaged and unsecured devices.

CONCLUSION

The "Consumerization" and mobilization of enterprise IT is a real, irreversible and unstoppable movement which needs immediate attention and innovative solutions in order to maintain secure endpoints as the potential for breach expands. However, when guided and supported by the proper tools and policies the benefits can be huge for all involved parties in that:

- Users are now able to choose and work with the devices of their own choosing, where and when they are most productive

- IT is unburdened from device support, helped with regulatory compliance and can focus on more strategic security goals

- The management gets more satisfied and productive users and a competitive advantage over competitors who are trying to figure out how to contain the unstoppable.

Trend Micro provides solutions to address numerous critical challenges in consumerized and mobilized enterprise environments, enabling enterprises to securely embrace and untap the benefits of the Consumerization of their IT.

FOR MORE INFORMATION:

 http://www.trendmicro.com/consumerization

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