

BUILD YOUR OWN DESTINY

“BRING YOUR OWN DEVICE” AS A SYMPTOM OF SOMETHING DEEPER

STRATEGIC WHITE PAPER

The reign of the personal computer (PC) as the predominant tool on an enterprise communications network is coming to an end. Employees are no longer content to be tethered to a desktop PC hardwired into the corporate local area network (LAN). Nor are they comfortable being restricted to bulky notebook PCs with cumbersome wireless access processes. Accustomed to the freedom they have to access their consumer applications anywhere, at any time and on any device, today's employees want the same seamless, ubiquitous access to enterprise applications on their personal devices whether they are within the work environment or well beyond the enterprise boundary. They are bringing their personal smartphones, tablets and other portable devices to work, and they expect to continue digital conversations with colleagues, partners and customers on these devices anywhere, at any time and with any application they choose.

This expectation is creating a considerable challenge for enterprise information technology (IT) teams worldwide. Because an employee's personal mobile devices are not under the control of the IT team, there is a higher risk of unauthorized access to sensitive corporate information from the outside whenever these devices are used. But while regulating the bring your own device (BYOD) trend is important for the short-term, the real challenge for enterprises is to prepare for a new paradigm of enterprise communications. The next generation of enterprise networks must support smart mobile devices that will change the way IT teams will serve the communications needs of employees to accommodate habits and benefits inherited from their consumer lives.

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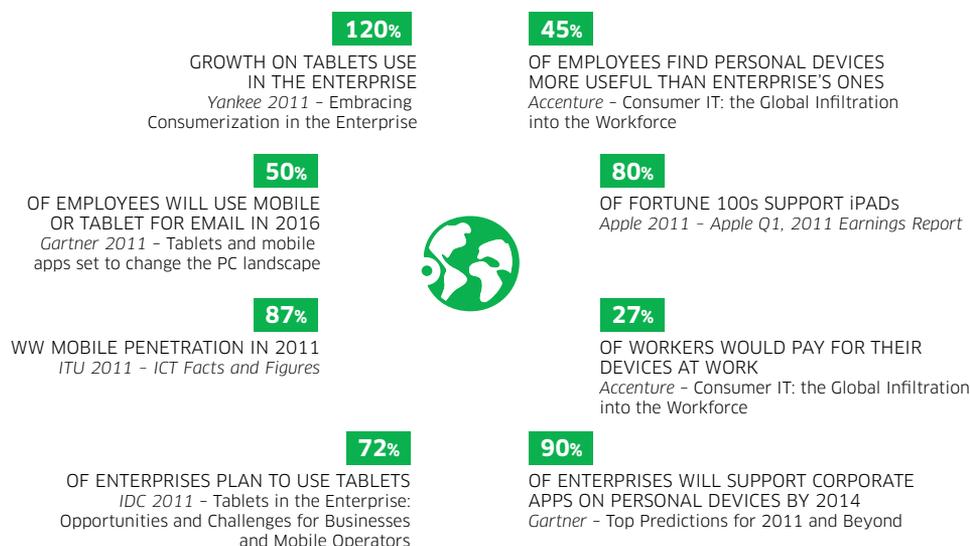
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AT THE EDGE OF A NEW PC ERA

The emergence of the BYOD culture is the direct result of the proliferation of easily portable mobile devices, such as netbooks, smartphones, and tablets. Consumers use these devices to connect to the Internet and build personal clouds by selecting applications that enable them to improve their communications experience or personal productivity. From this initial set up, they shape their personal cloud by adding or discarding applications based on their specific, individual needs at any point in time. And they begin to rely on them. As a result, the personal cloud becomes a personal companion and pushes the enterprise to enter into a new PC era, where the Personal Cloud becomes more important to employees than the Personal Computer.

At some point, consumers realize that there is a benefit to having their personal clouds support their professional lives. They mold them to address this need by downloading e-mail, word processing, conferencing and document sharing applications to their personal devices that can improve their work productivity. They use these applications whenever they can and, eventually, they become so accustomed to the ease of use that their personal clouds offer, that they don't think twice about leveraging them at work. When these devices show up on the enterprise network, IT departments must either support them, or banish them. Supporting them is the best option. But effective support requires IT teams to change their approach to the enterprise network.

Figure 1. BYOD facts and trends



SHIFTING TO A COMMUNICATIONS AS A SERVICE APPROACH

Evolving enterprise networks to support BYOD and smart mobile devices begins with changing the way organizations offer communications services. It is no longer viable for these services to be tied to specific devices. They must become independent of all devices so that they no longer require a user to be confined in the way that they use them. Some employees may use a unified communications application on their PC, some may use it on their smartphone, and others might use it on both devices. As a result, IT departments

must ensure that the application experience is seamless and continuous on any device. This is especially important to support employee mobility and to provide the same level of end user experience employees are accustomed to receiving from other applications in their personal cloud.

To make this experience possible, IT departments must change the way applications are provided to employees. Enterprise applications must adopt the convenience, user experience, and deployment model offered by consumer app stores. Therefore, IT teams must either post applications on public app stores or build their own enterprise app store from which employees can download the applications they want. Some call this process “Appification”.

Figure 2. One seamless conversation experience



EVOLVING TO A CONVERGED AND INTELLIGENT NETWORK

The nature of the network must also change. Enterprise networks were originally designed to handle computer-based traffic over wired networks. Wireless network overlays were an afterthought. But with the rise of tablets and smartphones the volume of wireless traffic has increased and will continue to increase over time. As a result, there is a need for more robust wired and wireless connections. And those connections must be able to support multiple devices that need pervasive access to deliver a variety of multimedia content at any time. This places an incredible strain on all network resources and requires a higher level of security, stability, capacity, and reliability.

In addition, because employees will continue to rely on personal clouds, the next generation of enterprise networks must be able to support employee access to these clouds over wired and wireless links. Therefore, the ideal solution must be optimized to prioritize an employee's enterprise business traffic over personal, non-critical traffic. This can only be achieved with an intelligent network that can monitor and recognize the nature of the traffic being generated by each user, prioritize critical enterprise traffic, and manage delivery of that traffic at the level of quality required to support enterprise communications processes.

EMBEDDING PERSONAL CLOUDS INTO ENTERPRISE CLOUDS

Ultimately, the architecture of the enterprise network must change. A more dynamic architecture is required that can accommodate the new application and traffic delivery models. The new architecture must be able to connect the personal cloud to the global enterprise cloud and enable seamless interconnection of every user's personal applications so they can work over the enterprise network. In this way, the productivity of end users can be optimized at all times.

For example, if an employee is using a mapping application on a personal tablet at work to locate a corporate shipment on its way to a customer, the network should be able to recognize the user, the device, and the application and enable the mash-up of personal and enterprise resources to support real time tracking of the shipment.

To enable this level of interconnection, enterprises need an agile cloud-ready architecture that can support new application use models and information distribution models.

BUILDING YOUR OWN DESTINY

Given the communications demands being created by the BYOD trend, and more broadly by the never-ending appetite for tablets and smartphones, the ideal enterprise network architecture should be built based on three essential criteria.

First, it must be able to support an unprecedented and continuously increasing demand for ubiquitous mobility. Employees must be able to access their personal and enterprise clouds from anywhere, at any time, and on any device so they can use mash-ups of personal and enterprise resources.

Second, it must be scalable and elastic. It must be able to allocate the right amount of network resources to every user at all times. The ideal enterprise architecture must be able to support communications through centralization and virtualization in an enterprise network cloud. This does not mean that the ideal architecture requires more hardware. On the contrary, it means rationalizing existing network elements to ensure that the right hardware is in place to enable and support the network cloud, and applying advanced traffic management tools, such as load balancing, to optimize the use of all elements at all times

Finally, it must have the ability to differentiate between personal and enterprise traffic and ensure the security of both. In this way, employees can be assured that their private data is secure at all times, and enterprise IT teams can rest easy knowing enterprise communications and information is secure.

BRINGING THE VISION TO REALITY

Alcatel-Lucent offers all the elements enterprises need to create agile architectures, solutions and services that support the BYOD trend. Our complete portfolio of wireless and wireline product, communications solutions and service offerings include all the necessary elements required to enable the evolution of enterprise architectures to support employee mobility and seamless communication over a personal and enterprise cloud. In addition, we offer communications services for smartphones and tablets that are optimized to enable enterprise level communications. Our network access control, application monitoring, and traffic management solutions are designed to provide effective management of all enterprise traffic. And our data center solutions enable network rationalization and centralization to support communications and information in an enterprise cloud.

To find out more about how you can build your own destiny with a more agile enterprise network, visit www.alcatel-lucent.com/enterprise.

