The Virtual Office: The Next-Generation Workplace
Knowledge workers need access to data and applications to get their work done. And they want to access information in the most convenient, productive and effective way. More specifically, they want that access from anywhere. Mobile workers can already make phone calls, send email or browse the Internet using their smartphones or tablets. Having access to corporate applications and desktops is the only missing piece.

This desire by knowledge workers coincides with certain important trends that have had an impact on the end-user computing model: virtualization and cloud computing. Desktop virtualization separated the knowledge worker’s applications from the standard, static desktop platform, and cloud computing introduced highly efficient ways to deploy and manage infrastructure resources.

These needs, desires and trends have coalesced around a service known as the Virtual Office. This service creates a virtual desktop and provides secure access to a full suite of productivity applications, as well as specific corporate line-of-business applications, in a flexible, secure, performance-enhancing and cost-effective manner, making remote access to applications and data available from any location — office, home, field or the road — and on any device.

Several trends make the Virtual Office an emerging, effective alternative to the traditional desktop: worker mobility, desktop virtualization and cloud computing.

**WORKER MOBILITY**

Traditionally, desktop technology has been represented by the PC and more recently by the laptop. But other form factors are just as effective, including modern handheld devices — smartphones and tablets. Employees’ use of mobile devices for work-related activities is continuously increasing, and is represented in the trend known as bring your own device (BYOD). Users want to bring their own devices and demand access to corporate applications and data from these devices. “It’s not the iPad as a mobile device that’s driving desktop virtualization adoption,” says Andrey Zhulenev, client partner, Wipro. “Users want mobile access to applications and data to be able to do more on the go.”

**DESKTOP VIRTUALIZATION**

Desktop virtualization is a mature technology these days. “Citrix® leads the pack,” says Zhulenev. “You implement it and have all the needed parts. Citrix HDX technology leverages fifteen-plus years of innovation to be able to deliver the best possible user experience over any network. You can travel across continents and not notice any performance degradation of your virtual desktop.”

Enabling mobile access to corporate applications drives workforce productivity, while self-service capabilities and a cost-efficient architecture speed adoption.
CLOUD COMPUTING
The cloud makes available the latest functionality, offers almost unlimited infrastructure scalability, and supports superior reliability and performance at reduced cost. Many knowledge workers already are familiar with applications provided in the software-as-a-service (SaaS) model, both in the office and at home. The Virtual Office is the next-generation, cloud-oriented workplace solution, delivering a full suite of productivity and corporate line-of-business applications in the “as a service” delivery model.

THE DETAILS BEHIND VIRTUAL OFFICE
Because the Virtual Office incorporates all possible pieces, functions and features of the IT infrastructure, including hardware, software, networking, security and support, it is made up of many moving parts. “It’s a pretty complex landscape to pick up and say — here it is, out of the box,” says Wipro’s Zhulenev.

For instance, by leveraging the Citrix XenDesktop® and Microsoft technologies, the Virtual Office can support any number of desktop virtualization models, including local virtual-machine (VM) desktops, streamed virtual desktops, virtual desktop infrastructure (VDI), and session virtualization. Application virtualization is supported through Citrix XenApp® and Microsoft App-V technology.

The Virtual Office offers time-to-market and cost advantages. It centralizes corporate data and applications in the data center, either in-house or in the cloud. Because the Virtual Office is a service, cost and performance are based on service-level agreements (SLAs) and are therefore easier to scope, manage and account for. Through the Virtual Office’s advanced application store capabilities, users can easily request any application they need, and software license management becomes a simpler and more efficient process.

By keeping all files and functions behind corporate firewalls, the Virtual Office service provides greater security than traditional desktop architectures. “When you move to the virtual desktop, data will be in a data center, centrally located and backed up,” says Zhulenev. The security features include single sign-on and controlled data access. Also, reliability is improved because business continuity and disaster recovery are built into the solution architecture itself.

The Virtual Office service can include end-user support in a multitenant help desk with email, chat and voice communication channels, all powered by a scalable call-routing platform. The advanced knowledge management portal provides end users with self-service capabilities for quick issue resolution.

The cost-effectiveness of the Virtual Office revolves around the cost savings allowed by the extensive use of storage and network virtualization technology, thoughtful selection of the server hardware, as well as the affordable infrastructure services available in the cloud. But it also involves the ability to employ an effective charge-back cost allocation within an enterprise, which many fiscally pressured CIOs are looking to use to track and account for IT costs more closely. “Companies want to properly allocate costs for these services,” says Zhulenev.

Worker mobility, desktop virtualization and cloud computing are making the Virtual Office an effective alternative to the traditional desktop.
The Compelling Case

To illustrate the point, Zhulenev shares a detailed customer example about “a company considered to be at forefront of this thinking.” The company spent over a year doing a thorough analysis and running an internal proof of technology, offering virtual desktops with basic sets of applications to nearly 500 users. (“They had planned for 100, but word got around and people jumped on it and loved it,” he adds.) The company spent such a substantial amount of time researching the concept and then socializing it internally in order to make sure their knowledge workers would accept the concept, understand it and use it effectively. “That’s a critical step any organization has to go through,” Zhulenev says.

Now the customer sees that desktop virtualization has reached the required maturity level and wants most of its approximately 50,000-person workforce to have access to this technology within the next 18 months. It is an ambitious goal: A minimum of five data centers will be required for the company to adopt Virtual Office on such a wide scale.

Still, the cost of desktop virtualization is decreasing rapidly to the level where it is becoming a cost-efficient model for end-user computing, Zhulenev says. While it requires an upfront investment, the annual per-user cost of a virtual desktop (including the end-point device) is becoming lower than the cost of a physical desktop. For that reason, desktop virtualization is moving into a mainstream adoption phase.

At the same time, workers today are increasingly mobile. In recent years, wireless Internet access has outgrown the number of landline Internet connections. This is especially true in Asia and developing countries where workers access the Internet primarily through mobile devices. And that’s where the growth markets are for most enterprises. Access to applications and data anytime from anywhere allows more work to get done. And every worker will be much more productive, measured in hours per week.

Seeking a Partner

Because of its strategic and tactical advantages, and because of its technology pedigree, it is not an exaggeration to say that the Virtual Office may well represent the future of end-user computing. It coincides with, and takes advantage of, several important trends in enterprise computing, as well as representing the overall trend in executive management’s view of IT — that is, as a business process tool and competitive engine rather than a tactical internal corporate function.

The Virtual Office is so compelling for both workers and management because it helps knowledge workers increase their productivity through access to more applications and data. And it also supports the strategies of many CIOs to transform all of IT into a service.

But it is not an easy step; rather, it is an ambitious and eventful journey. An expert and experienced service provider partner can help organizations make the move into this next-generation workplace.

The Virtual Office may well be the next step on the technological maturity curve started by virtualization and extended by SaaS and the cloud. Organizations would do well to explore this emerging trend, and reach out to a partner that can aid and abet that ambitious exploration.
Wipro’s Virtual Office Service

Wipro, one of the leading global IT service providers today, offers desktop support in various forms, and the Virtual Office is a logical extension of that service offering. Wipro can help companies that are unfamiliar with desktop virtualization, or unaware of how to get started.

For its Virtual Office Service, Wipro is working with Citrix and Microsoft, as well as Hewlett-Packard for hardware, and leverages infrastructure-as-a-service cloud services as appropriate. Wipro’s Virtual Office Service is available in two models:

- **Appliance Model.** In this type of service, the provider (Wipro) controls the hardware and software stack and the services around it, and delivers the Virtual Office solution as a managed service. The location of the service can be in the customer’s data center on the corporate network.

- **Cloud Solution.** This service leverages infrastructure in Wipro’s data centers and from cloud providers. This service is popular with large enterprises but especially with small and midsize businesses (SMBs). An SMB most likely would get access to the service through one of Wipro’s channel partners.

Wipro can help with strategy and assessment as well as with implementation. “As a vendor in a consulting engagement, we often step in and define the Virtual Office rollout, providing the client with a top-down view,” Zhulenev says.
ABOUT WIPRO TECHNOLOGIES

Wipro Technologies, the global IT business of Wipro Limited (NYSE:WIT), is a leading information technology, consulting and outsourcing company that delivers solutions to enable its clients do business better. Wipro Technologies delivers winning business outcomes through its deep industry experience and a 360-degree view of “business through technology” — helping clients create successful and adaptive businesses. A company recognized globally for its comprehensive portfolio of services, a practitioner’s approach to delivering innovation and an organization-wide commitment to sustainability, Wipro Technologies has 130,000 employees and clients across 54 countries.

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