

STRATEGY & PLANNING

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Microsoft Licensing Costs Pose Challenge to Desktop Virtualization Adoption

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Executive Summary

Following the success of server virtualization, IT managers are keen to evaluate potential savings from virtualized desktops. While examining virtual desktop infrastructure (VDI) solutions, buyers must first take a close look at the costs of licensing.

- » **Microsoft OS licensing costs.** VDI planners and implementers rank licensing costs, particularly the cost of licensing Vista Enterprise Centralized Desktop (VECD is the OS required for licensing virtual desktops), as the biggest challenge to a financially successful implementation.
- » **Device versus user.** The main problem with Microsoft licensing is that it remains tied to a specific device rather than a user. Microsoft's policies also create a forced upgrade scenario to Windows Vista in order to get virtual desktop licensing, called VECD.
- » **Early consideration is critical.** Decision makers who are exploring VDI must consider the licensing cost implications early in the planning process. Windows licensing will be the single largest cost component, ahead of VDI licensing or server costs.

According to Info-Tech research, desktop deployment and desk-side support and management can take up 12% of IT's resources. Deploying virtual desktops with a full understanding of the acquisition, operations, and licensing costs involved can help IT deliver better service while being cost effective.



Planning Point

Desktop virtualization (DV) is a potential win-win solution for IT departments and end users. Desktop virtualization uses machine virtualization for hosting PC virtual machines (VM) on a server and presentation virtualization for remote access of those VMs. The VMs typically run an operating system such as Windows XP or Vista on the host server that can be accessed by a client device such as a PC, laptop, or thin client using a connection broker.

This setup provides centralization of management/deployment of the desktops and delivers a similar, if not better end user experience. The challenge is that licensing for Windows based virtual desktop operating systems is still murky and can dramatically increase the cost of the solution.

State of Desktop Virtualization

Info-Tech Research Group recently concluded an in-depth research project examining the state of desktop virtualization and its future, "[The Rise of Desktop Virtualization](#)." The research shows that DV implementations are limited, but interest is high. The trends, based on number of people currently piloting or planning DV, indicate that adoption should grow significantly over the next year.



Figure 1. Desktop Virtualization Adoption, Q1, 2009

Source: Info-Tech Research Group

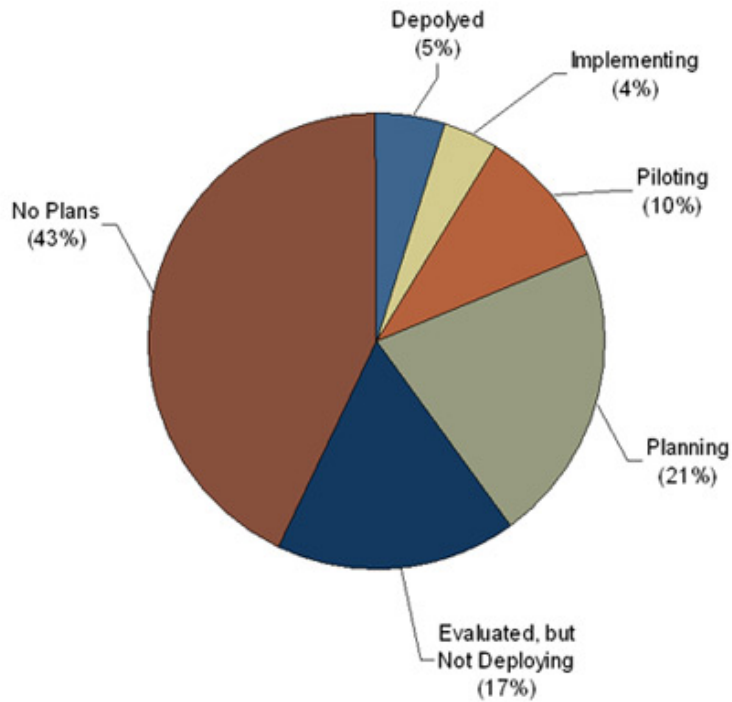
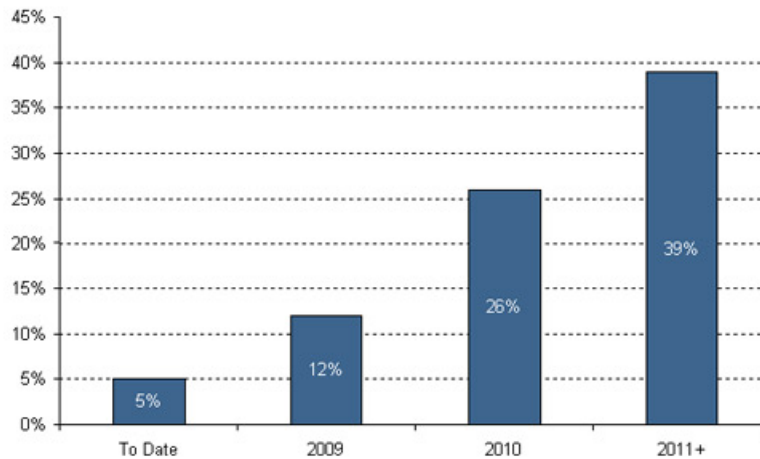


Figure 2. Projected Desktop Virtualization Adoption

Source: Info-Tech Research Group





Info-Tech Research Group predicts that DV will emerge as a significant alternative delivery mechanism for client desktops and move away from hard asset PCs to “soft asset” VMs. The PC can be anywhere (server, desktop, cloud) and can be accessed from anywhere (PC, laptop, handheld). Vendors such as [Citrix](#) with its XenDesktop and [VMware](#) with View are leading this trend.

Licensing VMs with Microsoft

Microsoft Windows licensing for virtual desktops has been identified by 27% of implementers and planners as being the most significant challenge in implementing VDI.

The reasons Microsoft licensing is an impediment to deploying virtual desktops are:

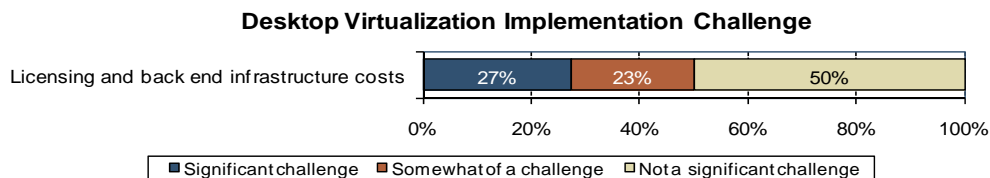
- » Only way to license virtual desktops is through Microsoft's Vista Enterprise Centralized Desktop (VECD). Existing XP or Vista licenses cannot be used.
- » Microsoft requires licensing each physical access device.
- » VECD requires a Vista upgrade even to run XP, which is what most users actually want.

“Our biggest challenge with VDI is the hit we take with Microsoft licensing. We see an issue where if it’s a company asset, has a company license, and then connects to VDI, we’re paying for two licenses. We’d probably expand its use more if we were able to tackle that hurdle.”

IT Manager, Insurance

Figure 3. Desktop Virtualization Implementation Change

Source: Info-Tech Research Group





Key Considerations

VECD was updated by Microsoft in early 2009 to adapt to some of the needs of virtual desktop users. However it still fails in recognizing existing licenses and requires Software Assurance (SA) which costs substantially more. SA also promotes Microsoft's shift from selling perpetual licenses to subscription based licenses. For more information on VECD licensing, refer to the ITA Premium research note, "[A Rosetta Stone for Windows Vista Virtual Licensing.](#)"

- » The advantage of VECD is that the virtual machine can be hosted anywhere (server, physical desktop, even in the cloud). Moving the VM does not cost more.
- » The disadvantage of VECD is that users are required to license every device that they access the VM from.
- » Also VECD is only available with Vista. The license allows the user to run 4 other Microsoft OS's on top of the VM. So a user who might want to run Windows XP, has to upgrade to VECD and then pay to downgrade to XP.
- » Based on the ITA Premium "[Virtual Desktop Infrastructure TCO per Desktop Tool,](#)" Microsoft Vista licensing under an SA subscription can cost as much as 14% of the total cost over a six year period even after factoring in the entire infrastructure costs of VDI and client hardware.

Figure 4. TCO Based on 100 Desktops Over Six Years

Source: Info-Tech Research Group

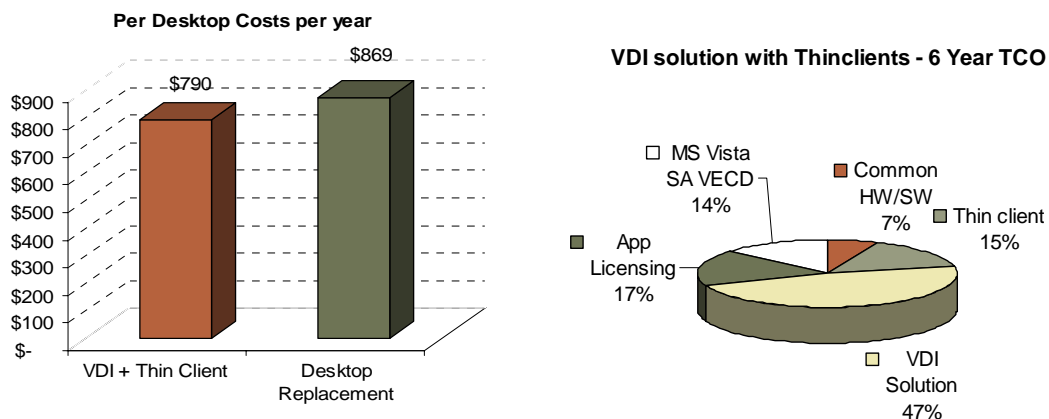




Table 1. Licensing Scenarios

Source: Info-Tech Research Group

	Microsoft VECD & Software Assurance	Microsoft VECD	Other
Cost / VD	\$\$\$\$	\$\$\$	\$
Description	<ul style="list-style-type: none"> » VECD upgrade for SA customers costs \$23 per device per year or \$59 for three years. » The cost of SA comes to \$349 with a fresh copy of MS Vista Enterprise edition per device for a three year subscription. » Alternatively, existing Windows licenses can be upgraded to SA for \$169 per device for three years. 	<ul style="list-style-type: none"> » Without Software Assurance, VECD comes to \$110 per access device per year or \$320 for three years. » VECD is licensed per device on a non-perpetual subscription basis. » Having an existing Windows OEM or other license does not exempt or lower the cost of VECD. 	<ul style="list-style-type: none"> » <u>Ubuntu</u> (or any Linux variant) is free to run on virtual machines. It is increasingly being looked to as an alternative to Microsoft OS's. » Solution providers such as IBM or HP can provide Linux based virtual desktops to cost conscious enterprises with support plans. » At this time Apple's OS X is not allowed to be run in a virtual machine.



Recommendations

1. **Consider licensing costs early.** Anyone considering DV needs to pay attention to licensing costs up front. Most vendor based TCO tools or models do not build in the costs of OS and application licensing. Getting approval for a VDI implementation based on just the costs of VDI software and hardware will substantially under-estimate the cost of actually running a Windows based virtual desktop.
2. **Learning from early adopters.** As with any emerging technology, there are early adopters whose experiences can help guide the masses on whether to go or not go. The Impact Research report, "[The Rise of Desktop Virtualization](#)" is based on the in-depth interviews with over 30 IT leaders in the midst of implementing or having implemented virtual desktops. The research also reflects the views and experiences of over 200 survey respondents on desktop virtualization. The report lays out in three parts the what, why and how of desktop virtualization and shares case studies of how implementers deployed desktop virtualization.
3. **Doing the math.** In the current economic climate, many organizations are more careful about where they invest their time and money. The ITA Premium "[Virtual Desktop Infrastructure TCO per Desktop Tool](#)" provides a quick overview of the costs associated with desktop virtualization from the additional power costs of additional storage in the data center to the licensing costs of the software. It also provides the template to adjust costs and reflect existing infrastructure. If nothing else the tool should serve as a model of costs to consider as the VDI plan is put together.
4. **Revisit corporate desktop requirements.** Virtual desktops are not an effective solution for all types of users. Prior to deciding between DV or desktop replacement or maintaining status quo, evaluate the actual requirements of users and match them with the right solution.

Bottom Line

With desktop virtualization, IT departments can expect to significantly reduce time spent on desk-side issues. However, deployments are hindered by Microsoft's OS licensing fee structure. IT leaders must consider Microsoft's licensing structure before delving into desktop virtualization.



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