

WHITE PAPER

A First Look at How Windows Intune Can Lower Costs and Raise Productivity

Sponsored by: Microsoft

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EXECUTIVE SUMMARY

Companies of all sizes face a variety of challenges in managing personal computers (PCs) throughout their organizations. Associated with those challenges are some opportunities for improved performance and control made possible by new solutions. While many large organizations have PC management tools in place, a significant number of other firms don't have solutions that handle essential PC management tasks such as providing updates and endpoint protection and keeping track of hardware and software inventory.

As a consequence, end users may experience hours of lost productivity due to missing updates or malware, and IT staff can be overwhelmed with reactive troubleshooting. As businesses grow and deploy new PCs into the environment, a new set of challenges can emerge: managing a range of PCs running different operating systems and software versions. Mixed environments can be an even greater chore to manage when the support of mobile workers is included. After all, remote workers may have high-speed connections but may not always be able to connect to a corporate network and gain access to support. Knowing what's on those PCs, as well as those that are in headquarters attached to the corporate network, would certainly be helpful, but this information may simply not be available.

Research conducted by IDC indicates that limited resources — whether in terms of IT manpower or budgets — is a commonly cited barrier to adopting a systems management solution. An alternative approach to traditional PC management solutions is cloud-based PC management, which can help organizations avoid lengthy server deployment projects and the overhead associated with the ongoing maintenance of on-premises servers. The approach can also enable IT to manage connected users located virtually anywhere, from anywhere.

With these issues in mind, Microsoft has developed Windows Intune, a cloud-based solution for PC management and security to help IT professionals manage today's increasingly complex and distributed workforce. Windows Intune was in public beta testing through the course of this research. It will be offered to customers via a monthly, per-PC subscription, providing financial flexibility so that companies pay only for the number of PCs they wish to manage.

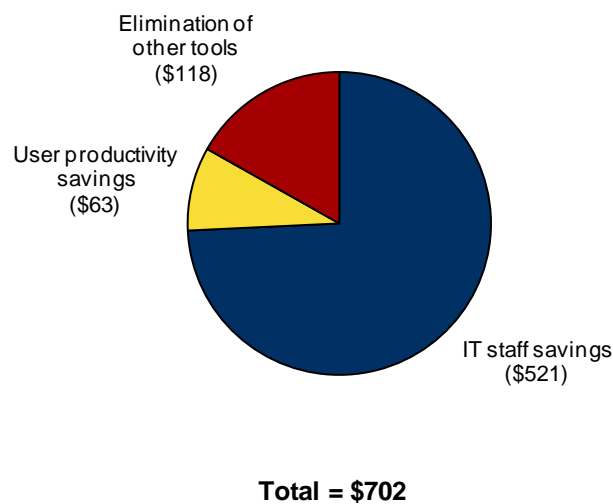
IDC has made an assessment of beta users at Microsoft's request to determine the kinds of savings associated with using Windows Intune. Initial results indicate that Windows Intune provides important IT productivity gains that can help improve management practices and lower operational costs. This is especially true among firms that didn't have an existing comprehensive management solution in place to address all their users — corporate, branch office, or remote employees who connect only occasionally to the corporate network.

IDC's study found a total savings of \$702 per PC per year with Windows Intune (see Figure 1). This cost reduction comprises cumulative savings from IT labor reduction of \$521 per PC per year, user productivity savings of \$63 per user (PC) per year, and some cost recovery of not having to use other tools at an average of \$118 per PC per year.

Although this study focused solely on the benefits of using the Windows Intune cloud service, the commercial Windows Intune subscription also includes upgrade rights to the latest version of the Windows client operating system — Windows 7 Enterprise — and future versions of Windows. In a separate IDC study sponsored by Microsoft, titled [The Benefit of Using Windows 7 in Small and Medium-Sized Businesses](#) (IDC #223959, June 2010; available for download from Microsoft), we found that businesses can realize an average of \$1,400 total benefits per PC annually by adopting Windows 7. While the results of these two studies are not additive, they are complementary: More than 50% of the benefits of Windows 7 are generated from improving user productivity, while the majority of the benefits of Windows Intune are the result of optimizing IT labor. The common thread is the cost savings that can result from adopting Windows 7 and/or Windows Intune.

FIGURE 1

Annual Benefit per PC from Windows Intune



Source: IDC, 2011

The cost reductions for the largest piece of pie — IT staff savings — come from four primary areas:

- ☒ Administrative labor, which fell by \$267 per PC per year
- ☒ Downtime labor (remediation), which fell by \$228 per PC per year
- ☒ Help desk labor, which fell by \$9 per PC per year
- ☒ Compliance labor, which fell by \$17 per PC per year

The following sections of this paper look closely at each of these cost savings derived from Windows Intune adoption. Note that the early customers testing Windows Intune had been using other PC management tools, although they were typically not comprehensive systems management solutions. Financial improvement would naturally have been even greater if there had been no management resources in place.

SITUATION OVERVIEW

A Renewed Emphasis on IT

Although IDC observed a trend in businesses reducing their IT spend in 2009, we saw companies increase their spending in 2010, with even more growth expected in 2011 to help support key business objectives. For many companies, a primary business priority has been to improve productivity and efficiency — for both IT and end users. Ultimately, this helps reduce the bottom line in terms of costs. Prior IDC research has even found that the greater the level of standardization — especially at the operating system level — the lower the operational costs and the better the system reliability.

Subsequently, the adoption of Windows 7 has become a popular starting point to achieve this goal, with companies expected to move forward with long-delayed PC upgrades. For businesses reluctant to update older software, the ability to move to Windows 7, and even run XP emulation, is especially important. Likewise, improvements to the security, stability, user interface, and performance of the operating system have made Windows 7 attractive for many customers. (For additional information on Microsoft Windows 7 productivity gains, see [The Benefit of Using Windows 7 in Small and Medium-Sized Businesses](#), IDC #223959, June 2010.)

Challenges in Managing Diverse, Distributed PC Environments

With the growing number of mobile and remote workers, notebook PCs have become commonplace. In arming employees with computing resources that can be used in the office or on the road, companies must adapt traditional support and maintenance approaches in order for IT (internal or partner delivered) to ensure that these workers can be productive from anywhere. Providing the latest versions of software and updates is essential to successful collaboration among employees who may be in multiple locations with different levels of available IT support.

Keeping track of resources — who has what and what needs to be updated — can be a major chore as firms grow; the growth in the number of branch offices and remote employees just adds to the complexity of infrastructure management.

Controlling the PCs of task workers is relatively easy when all the PCs are located inside the company office, protected by locked doors and corporate firewalls. But it's a different story when workers take their notebook PCs with them when they travel for work or are working from home in the evening. Physical security is essential, and the risks of data being lost or falling into the wrong hands are certainly real. An even greater threat can be the risk of a company network being compromised by the introduction of malware, which can result in major operational outages and long-term potential damage.

The paradox is that the flexibility and the freedom made possible by major deployments of notebook PCs need to be balanced by enhanced management and security procedures to keep workers current and protected so that they can remain productive from virtually anywhere. While some IT departments err on the side of caution, too severe a set of security constraints can impair worker productivity and agility, reducing the benefits that prompted investment in mobile worker computing in the first place.

With Microsoft cloud services, such as Windows Intune, IT staff can manage and protect PCs without compromising flexibility and productivity, from both an IT standpoint and an end-user standpoint.

PRODUCT OVERVIEW: WINDOWS INTUNE

Cloud-Based PC Management and Security

Windows Intune takes advantage of the cloud to deliver the essentials of PC management and protection without the need to deploy and maintain a server-based infrastructure. Windows Intune includes the following:

- ☒ **Single, cloud-based management and security solution.** Windows Intune can be administered via a simple, Web-based administration console.
- ☒ **Endpoint protection.** Antivirus and antimalware are included in Windows Intune and centrally managed from the administration console.
- ☒ **Management of updates.** The solution manages the deployment of all Microsoft security, critical, and noncritical updates to keep systems performing at their best.
- ☒ **Asset inventory functionality.** This allows IT to inventory systems to identify the operating system version, hardware status, and installed base of software.
- ☒ **Policy-based configuration.** Update, firewall, and malware protection policies can be centrally managed, even on remote machines outside the corporate network.
- ☒ **Remote assistance.** This functionality allows an IT professional to remotely troubleshoot and resolve problems.
- ☒ **Health monitoring.** The solution provides alerts and updates on the health status of each PC in the inventory.

Windows Intune is built on the same underlying infrastructure as the Windows Update service. Given the deep experience that Microsoft has with the Windows Update service, the underlying platform for Windows Intune is built to scale and the long-term vision is for Windows Intune to meet the needs of businesses of all sizes over time.

Upgrade Rights to Windows 7

The Windows Intune offering includes subscription-based upgrade rights to Windows 7 Enterprise and future versions of the Windows operating system. Customers interested in achieving a well-managed PC infrastructure should recognize that one of the first steps is to standardize on a single operating system and then ensure that the necessary tools are in place to keep the operating system current and highly secure.

As mentioned, prior IDC research related to Windows 7 found that Windows 7 offered lower operational costs, independent of the management infrastructure. Windows 7 Enterprise offers new security features such as BitLocker drive encryption (to better protect confidential data) and AppLocker (manages software through Group Policy) and improves the user experience with a new interface and advanced search capabilities.

Further, Windows XP is quickly approaching the end of its useful life cycle (mainstream support has already ended, and extended support expires in 2014), so customers should begin or at least plan a movement to the most current Windows operating system.

Windows Intune also includes the option to purchase the Microsoft Desktop Optimization Pack (MDOP), a suite of six on-premises software tools for more advanced management tasks. IDC notes that MDOP is compatible with Windows XP and Windows 7 (as well as Windows Vista), but for the latest features and benefits of MDOP, Windows 7 is the recommended platform.

THE BUSINESS VALUE OF WINDOWS INTUNE

Study Background

IDC performed a study of early Windows Intune beta users in the second half of CY10. The study was intended to measure the operational costs that companies experienced before using Windows Intune and then after using Windows Intune as the primary management tool for a small sample of their PCs.

This study was built around in-depth interviews with eight end-user organizations participating in the beta release of Windows Intune. The organizations had a mean number of 121 employees and an IT staff of three employees. These organizations were slightly overrepresented in their use of Windows 7 (30% of current installed base) and supported a mean of 127 PCs associated with the 121 employees. IDC conducted in-depth interviews to capture experiences before and after the implementation of Windows Intune. This knowledge was used to generate calculations used to determine the change in operational costs associated with the adoption of Windows Intune. (For more information, see the ROI Methodology and Study Demographics sections in the Appendix.)

Operational Benefits

IDC has long studied the cost of ownership for operating systems, PCs, servers, and applications and the impact of various software packages that can be used to help improve management practices. As a general rule, these studies commonly point to IT labor costs as one of the biggest contributors to a three- or five-year total cost of ownership (TCO) analysis. Therefore, optimizing IT staff productivity is usually the most significant way to reduce TCO. One of the best ways to optimize IT staff productivity is to standardize the configurations being supported — a consistent finding of numerous past IDC studies.

IDC's analysis, as depicted in Figure 1, indicates that early adopters using Windows Intune have been saving the equivalent of \$702 per PC per year through the use of Windows Intune. Of that total, \$521, or 74%, of annual cost savings originates from reductions in IT staff costs.

As indicated in Table 1, this \$521 annual savings comes from four primary areas: optimizing administrative labor, minimizing time and costs to remediate a downtime situation for PCs, lowering help desk costs, and minimizing the effort needed to meet compliance requirements. Given that the fully burdened staff salary averaged just over \$90,000 per year, this \$521 cost represents a savings of about 11 hours of IT labor per PC per year.

TABLE 1

Annual IT Staff Savings by Subcategory

	Annual Cost Savings per PC (\$)
Administrative labor	267
Downtime labor (remediation)	228
Help desk labor	9
Compliance labor	17
Total	521

Source: IDC, 2011

IT Labor Savings Related to Administrative Labor

Table 2 takes a deeper look at the IT labor related to administrative activities. The cost savings associated with using Windows Intune has the most impact on maintaining consistent PC configurations and managing updates. Those two areas together accounted for \$151 per PC per year, or about 57% of the IT labor staff savings made possible by the use of Windows Intune.

TABLE 2**Annual IT Staff Savings from Reduced Administrative Labor**

	Annual Cost Savings per PC (\$)
Ensuring constant configuration across all PCs	88
Performing patch management and update deployment	63
Conducting security-related activities (evaluating threats, testing patches)	37
Troubleshoot/repair	28
Managing remote or mobile users	23
Updating remote or mobile users	14
Asset management	10
Changing firewall settings	4
Total	267

Source: IDC, 2011

IT Labor Savings Related to Downtime Reduction

Table 3 details the annual IT savings associated with reducing the labor related to remediation of downtime.

One of the "hidden" costs that many IT professionals fail to recognize — because it doesn't show up in a purchase order or an accounting spreadsheet — is downtime. Downtime not only causes a chain reaction of labor investments to remediate a system but also incurs substantial costs from the inability of users to complete work while their PC is down.

Table 3 presents an overview of the major cost areas before and after the use of Windows Intune. As noted in Table 3, before the deployment of Windows Intune, IT labor costs for repair accounted for 63% of the downtime IT labor costs per PC per year in an average environment. After the deployment of Windows Intune, IT labor costs for repair dropped to 51% of a much smaller total.

Most management solutions, Windows Intune included, tend to drive proactive IT management and help prevent downtime. IDC estimates a savings of \$228 per PC per year from reducing or ultimately avoiding the need for remediation of PCs that are not working.

TABLE 3**IT Staff Savings from Reduced Downtime Labor**

	Without Windows Intune	With Windows Intune	Savings per PC
Downtime hours per month	5.0	1.6	3.4
Annual IT staff labor costs to repair down systems (\$)	175	26	149
Annual travel costs to repair remote PCs (\$)	83	21	62
Annual labor costs due to spyware (\$)	21	4	17
Total	279	51	228

Source: IDC, 2011

IT Labor Savings Related to Help Desk

As with downtime, companies were able to reduce the time IT staff has to deal with other issues affecting PC performance that are usually reported through the help desk, including software compatibility, access issues, and upgrades. By automating management and standardizing the desktop, companies were able to reduce the number and variety of problems. The result was that there were fewer help desk calls and the issues could be resolved more often by first-level responders.

As depicted in Table 4, prior to using Windows Intune, this sample group experienced help desk-related costs of \$25 per PC per year, which drops to \$16 per PC per year when using Windows Intune.

TABLE 4**IT Staff Savings from Help Desk Incident Reduction**

	Without Windows Intune	With Windows Intune	Savings per PC
Number of help desk calls relating to PC issues received each week	36.7	27.1	9.6
Average length of time (in hours) per call	0.2	0.1	0.0
Percentage of calls resolved by level 1 responders	42	52	10
Average length of time (in hours) to resolve each ticket	2.3	1.6	0.7
Annual IT labor hours per PC	0.5	0.3	0.2
Annual labor cost per PC (\$)	25	16	9

Source: IDC, 2011

Other Savings Areas

Eliminating Other Solutions

While some organizations had no tools in place, others were using third-party tools to perform updates, protect PCs from malware, and inventory systems. The shift from using third-party solutions to using a single solution led to an average savings of \$118 per PC per year for the organizations studied.

Reducing Employee Downtime

The final savings comes from improved user productivity by reducing the time that users do not have access to applications (downtime) including outages and help desk issues. This reduction of downtime led to additional productive work hours through the course of the year that otherwise would have been time wasted, time that therefore would end up costing the organization through reduced end-user productivity, or time that end users would have spent working with IT to resolve problems instead of doing their core job function. Organizations in our study were able to save \$63 per PC annually from reduced employee downtime.

RETURN ON INVESTMENT ANALYSIS

IDC uses the net present value (NPV) of the savings and increased revenue over three years in calculating the return on investment (ROI) and payback period for the deployment. The NPV of the savings is determined by subtracting the amount that would have been earned by investing the original sum in an instrument yielding a 12% return (to allow for the missed opportunity cost that could have been realized using that capital).

This accounts for both the assumed cost of money and the assumed rate of return. ROI analysis is described in Table 5.

Because IDC's examination was of beta deployments, the ROI analysis is impacted by two factors not found in production environments:

- ☒ **Understatement of performance improvement.** Because the analysis is over a short period of time and across only a portion of PCs in an organization, benefits are constrained and may be understated. We anticipate that once organizations have fully deployed Windows Intune and become accustomed to using it to its fullest capabilities, benefits will increase.
- ☒ **Actual investment.** We were not able to fully capture the consulting costs and training costs to migrate to Windows Intune. Because Windows Intune is a simple cloud service, we expect migration costs to be low, but these costs are not accurately captured in the current model. Time to deploy Windows Intune averaged about 30 minutes per PC.

Given their experiences in beta, companies in this study will average discounted benefits of \$1,684 per PC over a three-year period for a total discounted investment of \$416 per PC. This yields a return of 305%.

TABLE 5

Three-Year ROI Analysis per PC

Benefit (discounted)	\$1,684
Investment (discounted)	\$416
NPV	\$1,268
ROI	305%
Payback	0.5 months
Discount rate	12%

Source: IDC, 2011

CHALLENGES/OPPORTUNITIES**Challenges**

- ☒ **Justifying investment.** In many cases, organizations (particularly SMBs) use no management solutions in an attempt to avoid incurring cost or simply because they do not have the IT skills to deploy sophisticated management solutions. Despite the compelling story presented in this document for Windows Intune, the payback requires that there first be investment. For many organizations, a purchase is a far more tangible cost item than the burden of restoring down systems and the time lost by end users waiting to get their PCs back.
- ☒ **Displacing other management solutions.** For organizations currently using client management tools, a shift to Windows Intune may mandate the retirement of a current solution already in use. This means abandoning the current investment and taking on *potentially* new learning curves and balancing expectations for what an online solution can deliver versus what an in-house solution can provide.

Opportunities

- ☒ **The benefit of a management solution.** Businesses contemplating the deployment of their first PC management tool (or first consistent use of a management solution) create significant opportunity for IT teams to provide a better experience to end users, raising user satisfaction and overall company productivity, which should positively impact an organization's bottom line.

CONCLUSION

IDC research has found that nonstandardized PC environments and/or poor management practices are leading drivers of higher operational costs with Windows PCs. With the Windows 7 upgrade rights included in Windows Intune, businesses can address the first step in reducing complexity — standardizing the PC infrastructure on

a single operating system version. Using the Windows Intune cloud service, IT can efficiently and remotely ensure that all these PCs have the latest updates and are protected from malware so that users, virtually anywhere, can remain productive. All that's required — for IT and end users — is an Internet connection.

There are other benefits to the business that were not quantified in the study. IDC notes that in particular, removal of employee downtime, while a small portion of the overall savings (which was quantified in this study), also can provide meaningful benefits such as improving employee morale and job satisfaction.

With Windows Intune, Microsoft is leveraging the power of the cloud to help businesses of all sizes. Particularly for organizations that have not used management tools in the past, the opportunity to implement some of the management best practices — practices that have classically been the domain of enterprise customers — supported by an automated and distributed management solution represents a potential game changer for many businesses today.

APPENDIX

ROI Methodology

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of the technology as the foundation for the model. Based on these interviews, IDC performs a three-step process to calculate the ROI and payback period:

1. Measure the savings from reduced IT costs (staff, hardware, software, maintenance, and IT support), increased user productivity, and improved revenues over the term of the deployment.
2. Ascertain the investment made in deploying the solution and the associated training and support costs.
3. Project the costs and savings over a three-year period and calculate the ROI and payback for the deployed solution.

IDC uses the NPV of the savings and increased revenue over three years in calculating the ROI and payback period for the deployment. The NPV of the savings is determined by subtracting the amount that would have been earned by investing the original sum in an instrument yielding a 12% return (to allow for the missed opportunity cost that could have been realized using that capital).

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized below:

1. Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings.
2. Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.

3. The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.
4. Lost productivity is a product of downtime multiplied by burdened salary.
5. Lost revenue is a product of downtime multiplied by the average revenue generated per hour.
6. The NPV of the three-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

Because every hour of downtime does not equate to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of our assessment, we asked each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes the revenue at that rate.

Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

Study Demographics

Table 6 presents the demographics of the companies surveyed for this study. The average organization had 121 employees, an IT staff of three employees, and Windows 7 on 3 out of every 10 PCs. Not surprisingly, the vast majority of the remainder of the PCs were running Windows XP. The study group was based in the United States and in Europe, the Middle East, Eastern Europe, and Africa (EMEA).

The study largely focused on SMBs, although we believe the findings are applicable to larger organizations with common unmanaged PCs scenarios such as highly distributed offices, field or mobile employees, or newly acquired businesses to name a few.

Most of these companies were challenged by resource constraints in managing their PC environment. Only a few customers in our study had the luxury of dedicating staff to the PC management function; most had to allocate part of their time to the function. The ratio of PCs to IT staff averaged 81 to 1.

TABLE 6

Windows Intune Customer Interview Demographics

Metric	Demographic
Employees	121
IT staff	3
Physical servers	20
Virtual servers	18
PCs	127
Windows 7	30%
Windows XP	69%
Desktops	71%
Laptops	29%
Regions	U.S., EMEA
Industries	Architecture, financial services, food, manufacturing, healthcare, real estate, shipping
Annual IT salary	\$90,240
Annual end-user salary	\$76,256
Hourly IT salary	\$48
Hourly end-user salary	\$41

Notes:

Salaries depicted are fully burdened.

Approximately 1% of PCs had an operating system other than Windows XP or Windows 7.

Source: IDC, 2011

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