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The Business Value of Optimized Device Deployment with Dell ProDeploy Plus

IDC OPINION

Customer Experience - Users want minimal disruption when they get a new device, and IT departments need to maintain the system's fitness, security, reliability, and efficiency over the life of that system. Relying on partners to assist in this space may be a prudent option for companies looking to focus on their business and not on mundane IT tasks.

IDC found that organizations with the most optimized overall approaches (the dynamic level, see deployment model table 1) to PC deployment across deployment activities incur lower costs associated with IT staff time and lost user productivity compared with those with the least optimized processes (the basic level) by:

- An organization that has reached the dynamic level for all five deployment activities would spend 62% less IT staff time compared with a company at the basic level in all activities

- Dell ProDeploy Plus can help organizations optimize their deployment practices to save significant IT staff time, up to 50% which has a direct correlation to cost savings.

IDC found that organizations that turned to outside vendors for deployment services for three key reasons: vendors have the expertise required, the service is more cost effective, and the service improves the user experience and the quality of the deployment.

Dell ProDeploy Plus services can reduce deployment time by up to 50%.

SITUATION OVERVIEW

In today's digital economy, employees must be productive on any device, anywhere. IDC has observed a clear connection between overall employee satisfaction and employee's satisfaction with their devices. PCs are tightly connected with and inextricable from an employee's ability to

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do their job and connect with customers, partners, and coworkers. Unfortunately, enterprises struggle to deploy, operate, and dispose of these assets efficiently and economically. One in five organizations reported that problems caused by data migration, application issues, and end-user settings occurred right after a PC refresh. Industries are looking to provide a better user experience for an ever-increasing mobile workforce. The scale and scope of user demand are growing faster than ever, with each person using technology differently and with increasingly varied requirements.

Key Areas of Device Provisioning and Deployment

In terms of deployment and client management, enterprises should think of the following key areas:

- Program management: Program managers will need to think about what systems are purchased and who gets what types of system. Equally important is how the company tracks those systems, not just through the deployment process but also throughout the life cycle of the device. Program management is not just about a onetime purchase and how the device is deployed. Enterprises must track systems throughout their life cycle until the next device is procured and deployed. Robust policies and procedures that can follow devices throughout their life cycle are critical to end-user productivity and satisfaction.

- Staging and logistics: Being able to quickly provision a system to a user is critical, whether an organization is onboarding a new employee, providing an existing employee with a new device, or repairing an existing user's system. A well-defined process for managing these systems can be a key time saver.

- Imaging: There are a multitude of facets to imaging, image build, image management, image install and image testing. Organizations can benefit immensely by investing in the right partners and tools to deliver system imaging effectively and efficiently.

- User data: A critical component for the best customer experience is returned the device with all the data and user preferences intact. Organizations need to think about what the best way to back up and migrate user data.

- Applications: Additional applications and new virtual operating environments should be available on an as-needed basis, incorporating tutorials and training if needed. One possibility is creating an application store that users can access on an as-needed basis.

All deployment activities have an overarching theme of security. Security standards (patches, updates, and tools) must be applied before the device arrives onsite. These features must secure the user data and protect the data from threats, ranging from malware and hackers looking to infiltrate new devices on a network to being able to remotely wipe or track systems after they have been compromised. Although 2/3 of organizations believed they are well prepared to secure company, customer, and employee data, 1/3 of organizations reported alarming data security issues that could have been prevented with more stringent processes for PC decommissioning.

IDC and Dell conducted extensive research to understand the deployment experience and quantify the impact of new devices. IDC and Dell collaborated to develop an outline of an optimized deployment model to help companies understand and evaluate the maturity of their existing PC deployment practices and ways they can improve their practices. Table 1 provides five specific activities defined by the PC-optimized deployment model. Dell provides users with a myriad of tools to help customers move up the maturity curve as it pertains to Deployment, IDC will review some of these solutions as it relates to the maturity model.

TABLE 1   Overview of the PC-Optimized Deployment Model

	Basic	Standardized	Rationalized	Dynamic
Program management	No centralized deployment planning or tracking	Deployment status manually tracked through general office software tools	PMO aggregates deployment task status into centralizedmonitoring tools	Automated deployment monitoring and reporting with proactive issue resolution
Staging and logistics	Multiple legs for warehousing and staging	Buffer stock warehousing only	PC's shipped directly from OEMs to campus location	PC's shipped directly from OEMs to remote users
Imaging	Centralized image applied in the field	Image loaded as part of the PC build process	A dynamic cross-platform image loaded in factory	Extend onsite PC management to factory for imaging, domain join, and security updates
Applications	<25% of apps and updates automated and successful	50% of apps and updates automated and successful	90% of apps and updates automated and successful	Applications available in a self-service store
User data	Files stored locally on the user's PC	Files stored locally; automated migration to new computers	Files stored locally; regular snapshots backed up to the network	User data lives in a secure cloud and is available to the user on any device

Source: IDC and Dell, 2019

LBUSINESS VALUE OF OPTIMIZING PC DEPLOYMENTCHALLENGES/ OPPORTUNITIES

IDC surveyed 1,000 organizations located around the world to understand the impact of optimizing PC deployment activities. These organizations were roughly evenly distributed

by size (SMB to Enterprise), region (North America, EMEA, and APAC), and vertical industry. For additional details about the survey sample, see the Methodology section. All interviewed organizations deploy PCs to employees on a regular cadence of at least one deployment per year.

Given the critical role of PCs to everyday work and the resources devoted to ongoing deployments, the importance of making deployments efficient, timely, and seamless is obvious. IDC's analysis considered the following in evaluating the cost to organizations of deploying PCs:
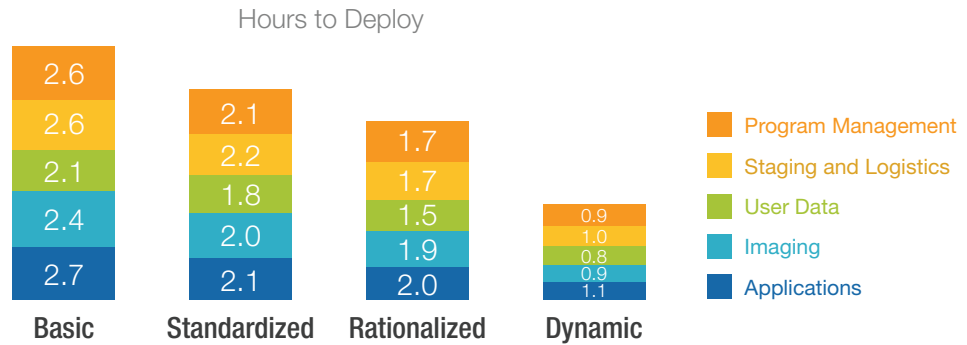
- IT labor staff time involved in PC activities (refer back to Table 1)

- User productivity costs are calculated based on time that a user cannot use the PC due to issues, which can include deployment-related problems and changes required

Deployment Cost Analysis by Optimization Level for Each Deployment Activity

IDC analyzed the impact of increased optimization by deployment activity (see Figure 1). This analysis is based on assessing the level of maturity (i.e., basic, standardized, rationalized, and dynamic) for each organization for each deployment activity and then assessing the average IT staff time cost for organizations grouped within each level of maturity for each activity (refer back to Table 2 for the breakout by maturity level at a deployment activity level). This reflects the costs associated with IT staff time related to activities based on the optimization level achieved for each PC deployment activity. As such, this analysis differs from the previously discussed organizational-level analysis (refer back to Figure 1) because it does not consider overall per-company deployment costs for each survey participant.

The per-deployment activity analysis demonstrates that organizations achieve even more significant efficiencies as they optimize their processes. Figure 3 shows the extent to which leveraging automation, standardized processes, cloud-based storage, and self-service capabilities can reduce human touch points required for these activities and thus lower costs associated with IT staff time. In turn, based on averages of costs by activity, the cost associated with IT staff time related to deployment is reduced from an average of 12.43 hours per PC at the basic level to 4.70 hours per PC at the dynamic level. As a result, based on these averages, this is how an organization that has reached the dynamic level for all five deployment activities would spend 62%% less IT staff time compared with a company at the basic level in all activities.

FIGURE 1 IT Staff Time to Deploy per PC by Optimization Level
Achieved per Deployment Activity

Hours to Deploy

	Program Management
	Staging and Logistics
	User Data
	Imaging
	Applications

Basic: 2.6, 2.6, 2.1, 2.4, 2.7
Standardized: 2.1, 2.2, 1.8, 2.0, 2.1
Rationalized: 1.7, 1.7, 1.5, 1.9, 2.0
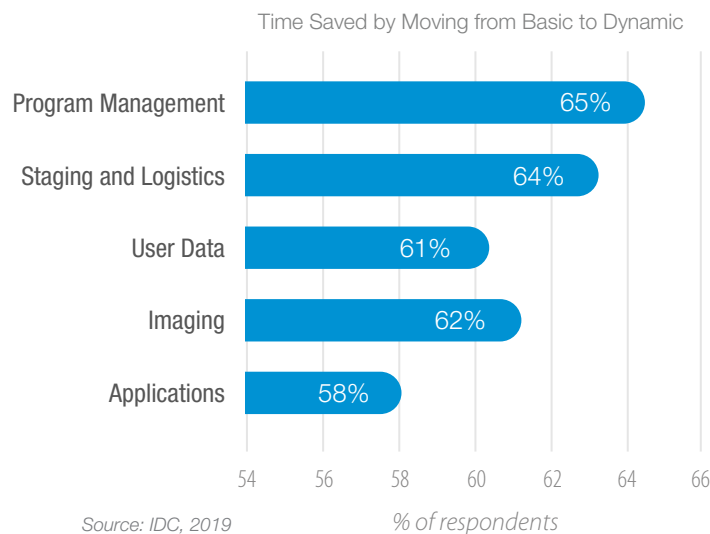Dynamic: 0.9, 1.0, 0.8, 0.9, 1.1

Note: Because of weighting and optimization groups with different numbers of organizations in each group, the total average number does not equal the average of PC deployment costs presented by deployment activity optimization level in Figure 3.

Source: IDC, 2019

Figure 2 shows the relative cost efficiency in terms of costs associated with IT staff time as organizations move from the basic level to the dynamic level in each of the measured deployment. More advanced deployment practices have a noticeable impact across all activities tracked for this study, with organizations realizing savings associated with IT staff time ranging from 58% for application-related activities to 65% for imaging-related activities. This demonstrates the extent to which organizations benefit in these PC deployment activities by taking advantage of automation where possible and leveraging standardized and centralized processes rather than relying on siloed approaches.

FIGURE 2 IT Staff Time Savings by Moving from Basic to Dynamic
Optimization Level per Deployment Activity

Time Saved by Moving from Basic to Dynamic

Activity	%
Program Management	65%
Staging and Logistics	64%
User Data	61%
Imaging	62%
Applications	58%

54 56 58 60 62 64 66

Source: IDC, 2019   *% of respondents*

Potential Benefits of Dell ProDeploy Plus

To demonstrate the potential impact for an organization of adopting more streamlined and efficient deployment processes by leveraging the Dell ProDeploy Client Suite of services, IDC has created a hypothetical analysis based on the analysis presented in Figures 1 and 2. The assumptions for this analysis are:

- An organization is at the basic level for all deployment activities before beginning to use Dell ProDeploy Plus.

- An organization advances with Dell ProDeploy Plus by deployment activity to the standardized rationalized level for applications and user data, and the dynamic level for imaging, project management, and staging and logistics.

Using Dell ProDeploy Plus, an organization would potentially reduce its costs associated with IT staff time by 50%, (reducing staff time from 12.43 hours to 6.25 hours) (see Figures 5, 6 and 7). This would represent a substantial potential savings that could change the economics for this organization of device deployment, especially if these savings were to be realized across hundreds or even thousands of devices deployed per year.

The value of time and employee productivity impacts employees as well as IT staff. After PCs are deployed, employees lose 1.85 hours due to lost data or settings. Employees are losing time waiting for IT staff to address issues with their devices, and they are also spending their own time trying to resolve issues after the technician is done.

When asked what percentage of users reported lost data after a PC is deployed, 54.4% said that up to 24% of users reported lost data or settings. 22% reported that 25-49% of users lost data. The most common root causes of these problems are application issues, end user and data migration issues.

After the technician is done resolving the cause of the problem, employees lose productivity, with more than 40% of employees spending more than an hour changing settings and moving data after the technician is done.

To address this issue and further reduce time spent on deployment, Dell ProDeploy Plus offers 30 days of post-deployment support. This virtually eliminates the time the 19% of staff time spent on dealing with post deployment issues.

FIGURE 3 Dell ProDeploy Plus with VMware Workspace One(for more information see separate paper on Workspace One)
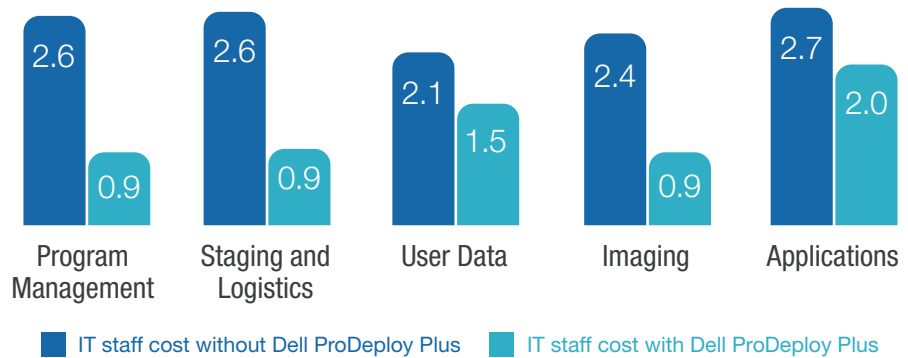
IT can reduce staff time by 50% when utilizing Dell ProDeploy Plus with Workspace One

Potential Time Savings (Hours) – Dell ProDeploy Plus with WMware Workspace One

2.6	2.6	2.1	2.4	2.7
0.9	0.9	1.5	0.9	2.0
Program Management	Staging and Logistics	User Data	Imaging	Applications

■ IT staff cost without Dell ProDeploy Plus   ■ IT staff cost with Dell ProDeploy Plus

Dell ProDeploy Client Suite section for assumptions used for this analysis   *Source: IDC, 2019*

With Provisioning for Workspace ONE, organizations may be able to reduce the time and complexity of deploying PCs, while enabling security features for corporate devices. Dell and VMware, leveraging the Dell factory, enables organizations to create a ready-to-work pc experience almost immediately by provisioning the systems in the factory, shipping to user, and enabling cloud management. This process may be able to free up IT time spent staging and imaging systems themselves.

FIGURE 4 Dell ProDeply Plus with connected Configuration

IT can reduce staff time by 30% when utilizing Dell ProDeploy Plus with Connected Configuration

Potential Time Savings (Hours) – Dell ProDeploy Plus with WMware Workspace One

2.6	2.6	2.1	2.4	2.7
0.9	0.9	1.5	0.9	2.0
Program Management	Staging and Logistics	User Data	Imaging	Applications

■ IT staff cost without Dell ProDeploy Plus   ■ IT staff cost with Dell ProDeploy Plus

Dell ProDeploy Client Suite section for assumptions used for this analysis   *Source: IDC, 2019*

The Dell Connected Configuration service allows control to configure systems for system management software such as Microsoft SCCM via a secure VPN connection, which allows direct access to servers in the Dell Configuration Centers where enterprises can complete all configuration tasks.

The Dell Connected Configuration Service allows imaging, changing BIOS settings, partitioning hard drives, loading third party software and applications and installing the latest drivers and patches in a customized task sequence. Enterprises can also complete configuration tasks such as joining the domain that traditionally only can be performed when the system is present in your own network.

FIGURE 5 Dell ProDeply Plus with ImageAssist
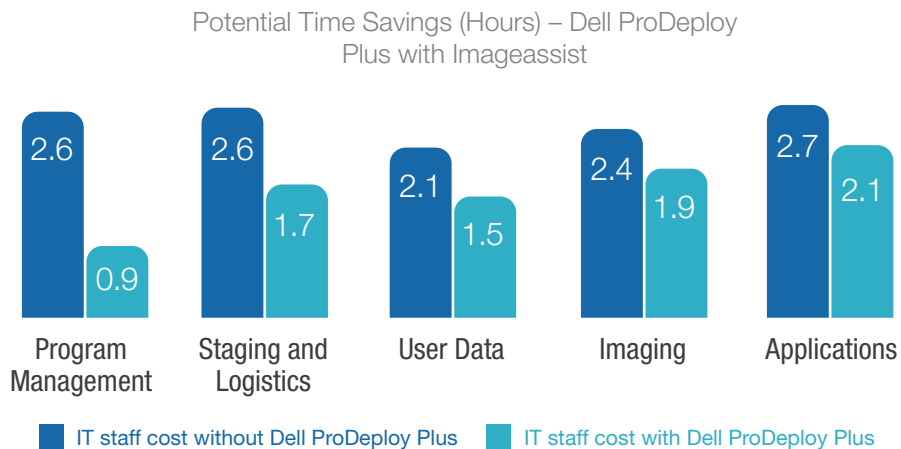
IT can reduce staff time by 21% when utilizing Dell ProDeploy Plus with ImageAssist

Potential Time Savings (Hours) – Dell ProDeploy Plus with Imageassist

	Program Management	Staging and Logistics	User Data	Imaging	Applications
IT staff cost without Dell ProDeploy Plus	2.6	2.6	2.1	2.4	2.7
IT staff cost with Dell ProDeploy Plus	0.9	1.7	1.5	1.9	2.1

Dell ProDeploy Client Suite section for assumptions used for this analysis   *Source: IDC, 2019*

Dell ImageAssist allows for a cross platform image through a user interface which helps you prepare a custom image. This includes OS, licensing, applications, desktop customization and network configuration settings. Static Image Capture, if you have a single platform image or do not need to support future platforms, this feature enables you to capture a WIM image and send it to Dell's factory for installation on new systems. It also enables enterprises to restore that image locally. ImageAssist features:

● The user interface provides a step by step process to create a new image

● Images are validated automatically prior to loading onto new systems

Dell Deployment Services

Dell has developed the concept of the frictionless user experience, based on trends in what IT leaders are asking for, which include the following:

- Companies expect simplified, global, mobile, and remote deployment of PC assets.

- Companies expect that asset delivery will be flexible and have self-service capabilities.

- Companies want to eliminate end-user disruption during PC deployment.

- The experience of getting a new PC should be fun and exciting for end users.

- Utilizing a partner enables IT staff to stay focused on business improvement, not on mundane IT tasks.

- Companies want to increase internal employees' customer satisfaction with IT by providing the best user experience.

By employing the ProDeploy Client Suite to move PC deployment practices along the maturity spectrum (progressing to standardized, rationalized, and eventually dynamic levels), IT organizations can dramatically improve the PC deployment process for their demanding end-user customers.

For enterprises seeking further assistance to achieve "dynamic" PC deployment maturity practices, Dell ProDeploy Plus helps customers save up to 50% for those that are currently operating at a fully basic level.

Figure 6 shows the Dell ProDeploy Suite of services. These services can help enterprises improve their PC deployment practices and move toward "dynamic" in all the categories in the optimized deployment model.

FIGURE 6 ProDeploy Client Suite: Feature Comparison

	Key Features	Basic Deployment	ProDeploy	ProDeploy Plus
Pre-deploy	Single point of contact for project management	●	●	●
	TechDirect portal for configuration details and updates	●	●	●
	Deployment engineer develops implementation plan		●	●
	TSM engagement via ProSupport Plus			●
Deploy	Connected Configuration			●
	Provisioning for VMware® Workspace ONE™	Add-on	●	●
	Load an image: WIM; Ghost; ISO; or ImageAssist	Add-on	●	●
	Load a generic image	Add-on	●	●
	Configure BIOS settings	●	●	●
	Apply asset tag and shipping box label	●	●	●
	Standard asset reports		●	●
	Onsite installation of client systems available 24x7		●	●
	Project documentation with knowledge transfer			●
	User settings and data migrated to new system			●
Post-deploy	30 day post-deployment support			●
	Training credits for Dell EMC Education Services			●

Source: IDC, 2019

IDC sees imaging as an area of opportunity for enterprises to gain major time savings which enable cost efficiencies. Being able to deliver the right system to the user in a frictionless manner is key and imaging is one of those cornerstones to that delivery.

IDC evaluated 3 of Dell's imaging services in particular:

Provisioning for VMware Workspace ONE: Offered in Dell ProDeploy and ProDeploy Plus

- Allows Factory install of Win10

- Pre-configure apps and settings in factory with Workspace ONE and ship to IT or directly to end user

- End-user prompted with simple out-of-box setup process

- Post-deployment management with Workspace ONE ensures firmware, drivers, OS, policy and apps up to date after a user powers on the device

- Apps and management persist during an operating system reset or recovery

Connected Configuration – The real-time configuration solution from Dell is the flagship offer that allows the most control over the configuration of your systems. Offered in Dell ProDeploy and ProDeploy Plus

- Uses a secure VPN connection to the Dell facility

- Integrates with SCCM and MDT

- System arrives at customer site with the custom image, domain join, active directory enrollment, BIOS/security configuration and encryption

- Version control and image testing

ImageAssist - Allows for a cross platform image through a user interface which helps IT prepare a custom image available with ProDeploy and ProDeploy Plus. Important features include:

- The validation tool performs a verification which includes: the registry, services, installed software, drivers, files, and policies

- It will also check for known conflicting configurations or software that will prevent the image from being hardware agnostic or that will stop the factory process from running

- If a failure is identified, the validation tool will recommend the corrective action

Given the time savings noted throughout this document, it makes business sense to use a provider such as Dell when deploying PCs and other IT assets. IDC believes that third-party deployment services should be used to help enterprises create an easy and cost-effective deployment process. Dell's offerings can help enterprises stay focused on the most important business operational tasks and realize a cost-effective deployment strategy.

CHALLENGES/OPPORTUNITIES

Enterprises are looking to create a better customer experience and streamline the delivery of the critical systems that keep employees productive. IDC has spoken to many customers looking to better the user experience within their organization, Dell with their solution set has the opportunity to help create better PC delivery processes for organizations. Dell does face two small challenges with its services offerings. The first is, convincing customers of the value — the benefits of the offerings are cost savings resulting from reduced time demands on IT staff, which customers tend to value less than "hard" cost savings. In recent years, companies have taken a broader view of value when considering the benefits of upgrading technology. With millennials in the workforce on the rise and companies looking to provide users with a

better IT experience, IDC sees value shifting from not just cost savings but also experience-related benefits. This means that Dell will need to continue to emphasize not only IT resource efficiency but also a better overall PC experience.

Dell's second challenge is continuing to meet and exceed customer expectations. With all services offerings, if customer demand increases dramatically, providers face the risk of not being able to deliver to expectations because of a shortage of resources. Dell has positioned itself well to be able to meet this challenge by automating much of the process. This automation should be valuable if Dell can convince a wide range of customers to adopt its offerings.

CONCLUSION

PCs are inextricably linked with employee productivity. They are essential in connecting and influencing customers and partners and collaborating internally. As capable and experienced as internal IT organizations are, the challenges of supporting a mobile workforce, often in multiple regions around the globe, strains IT operations staff resources and creates resource inefficiencies. IDC's research findings point to a significant opportunity to save time, as well as reduce costs, by improving the PC deployment process.

METHODOLOGY

The research provided in this document is based on surveys conducted in July 2019 with 1,000 organizations from North America, EMEA, and APAC. Table 4 provides the details regarding the survey respondents' company size, country, region, and industry. Companies were asked for information specific to their deployment of PCs. The research was designed to test Dell's IT optimization model for PC deployment that IDC and Dell collaborated on to determine the impact of optimized practices on the cost of deploying PCs.

IDC quantified costs related to deployment in two ways: the cost associated with IT staff time for carrying out deployment-related activities and the cost of lost end-user productivity from deployment-related outages and other problems ("costs related to lost user productivity" throughout this study).

IDC used the following fully loaded annual salary assumptions for quantifying the value of IT staff and user time:

- **United States:** $100,000 per year for IT staff; $70,000 per year for other users

- **Australia:** $111,000 per year for IT staff; $77,700 per year for other users

- **China:** $44,900 per year for IT staff; $31,430 per year for other users

- **India:** $44,900 per year for IT staff; $31,430 per year for other users

- **France:** $92,000 per year for IT staff; $64,400 per year for other users

- **Germany:** $95,000 per year for IT staff; $66,500 per year for other users

- **United Kingdom:** $93,000 per year for IT staff; $65,100 per year for other users

- **Japan:** $94,200 per year for IT staff; $65,900 per year for other users

- **Brazil:** $75,000 per year for IT staff; $52,500 per year for other users

This results in weighted average fully loaded salaries across all surveyed organizations of $88,080 per year ($46.85 per hour) for IT staff and $61,656 per year ($32.80 per hour) for end users.

IDC assumes 1,880 hours of working time per year (47 weeks x 40 hours).

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

APPENDIX B: PC DEPLOYMENT ACTIVITIES

The PC deployment activities are discussed in the sections that follow, and IDC asked the survey respondents to choose the best definition for how their companies deliver each of the activities.

Program Management
For program management, survey respondents were asked whether they used centralized deployment planning or tracking and whether processes surrounding deployment status tracking were more manual or automated in nature.

Staging and Logistics
For staging and logistics, survey respondents were asked about the shipment of PCs to users and warehousing practices.

Imaging
For image (Management, development, loading and testing), survey respondents were asked about when imaging was conducted in the deployment process as well as the integration of security updates in imaging.

Applications

For application loading, survey respondents were asked about the levels of automation and success of application deployment and updates and the availability of self-service.

User Data

For user-state migration, survey respondents were asked about where user data resides and how it is migrated to new PCs.

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