

## LENOVO® AUTOMATED DEPLOYMENT SERVICES

### HARDWARE-INDEPENDENT IMAGE

#### THE DEPLOYMENT CHALLENGE

With overall rising expectations for corporate IT to meet cost targets and improve business effectiveness, many IT executives feel increased pressure to achieve even greater productivity from their overworked IT staff and to evolve their organization as an important strategic tool. One of the key challenges they identify is how to increase IT responsiveness by reallocating funding to priority projects that facilitate new product creation and entry into new markets.

#### AUTOMATED DEPLOYMENT SERVICES

To attack this challenge, many IT infrastructure leaders are creating operational efficiencies by simplifying IT deployment and shortening provisioning time. These leaders are embracing Gartner's "Shift Left" recommendation for improving efficiency. Lenovo fulfills this strategic vision by enabling organizations to increase capacity through shifting specialized technical activities – such as image design and delivery – to hardware manufacturing. As a result, these organizations enjoy the economies of scale afforded by Lenovo manufacturing to shift the costs of image design and delivery tasks from an expensive, high-touch model, to a low-touch predictable-service model that yields the same results, but at a lower price point.

Our ultimate goal is the "touchless" deployment. To accomplish this goal, we bring together three high-value Lenovo imaging services:

- **Lenovo Image Delivery Service** – creating and testing highly stable, easily maintained images that are installed in manufacturing
- **Lenovo First Boot Services** – automating unattended processes that must be completed before a technician or end-user can use a PC and installing this functionality within manufacturing
- **Advanced Deployment Services** – automating the manual install steps associated with final image configuration when the system is first deployed

#### LENOVO IMAGE DELIVERY SERVICES

Lenovo's Imaging Services provide image creation and maintenance for all PC hardware brands, not just Lenovo hardware. Our image delivery services ensure that neither your technical staff nor your end users waste time manually configuring their systems. As a result, you protect their productivity. You will receive your PCs with your unique corporate image having been installed within manufacturing. This substantially reduces the cost and disruption associated with onsite deployment activities.

Our imaging services include specification and implementation of the following image components:

- BIOS settings – password protect, enable or disable options, change boot order
- Operating system – multi-language support, patches, desktop appearance customization, disable or enable specific items, OS operating parameters, etc.
- Network settings – preconfigured for your organization
- Security – preconfigured for your environment
- Commercial software – installed and configured
- Custom application software – installed and configured
- TVT Integration – leverage the expertise of the ITC to configure your TVT's
- VPRO – preconfigured to save you time at deployment

# BETTER THAN TRADITIONAL IMAGE MANAGEMENT

## FIRST BOOT SERVICES

Before you can actually use your PCs, your technicians need to perform final configuration steps. These steps increase your deployment times and include:

- Microsoft Sysprep
- Driver installation
- Common applications that must be installed per PC/User (Antivirus, SCCM, etc)
- Encryption of Hard Drive

Completing final configuration of these first boot steps can often take the IT staff 1 to 2 hours to boot each new PC and customize it for their environment and end users.

- Reduce the cost and disruption associated with onsite deployment activities
- Save valuable time, resources and costs in the initial deployment process with First Boot Services

With Lenovo's First Boot Service you can automate these unattended first boot processes for any image type and move them into Lenovo manufacturing. And, for those tasks that require access to your network, our Advanced Deployment Service enables your final configuration steps to be easily performed by your end users at their desks. In addition, desk-side site surveys can be reduced or even eliminated because the work to identify unique configuration requirements is built into the automated process before hand. As a result, you save valuable time, resources and costs in the initial deployment process.

## ADVANCED DEPLOYMENT SERVICES

Traditionally, after your image is restored to a system, a great deal of technician time is needed to complete configuration of the computer including: joining a domain, installing user specific applications, and moving user data. However, with Lenovo's Advanced Deployment Services (ADS) you can fully automate your post image deployment process from within the image. Now you have achieved reducing your technician's touch time to a few minutes or to zero.

- Complete configuration of the computer and move user data with ADS
- Reduce technician touch time to a few minutes or to zero by automating your post image deployment process

ADS can automate any task that can be scripted in Win 7/8, for example:

- Joining Domains \ Active Organizational Units
- Creating User Accounts
- Configuring Email Accounts
- Multiple Language Support
- Install Applications by Group or Picklist
- Install Applications based on Detected Hardware
- Setup Network Printers
- Configure Regional Settings (Time zone, Currency, Input Language, etc.)
- Configure Network Settings for different sites (ie, DNS, subnets, etc.)
- Automate configuration based on system BIOS Data and Network Queries
- Rescue and Recovery Initial Backup after final configuration
- Access Connections Profile Deployment
- BitLocker / Sophos Automated Encryption
- Data migration

With large amounts of data and settings distributed across the end user's hard drive, a manual touch migration process can take the bulk of your deployment time. This results in an unpredictable, high cost process. However, your ADS solution also offers the flexibility of migrating data via peer to peer and "in place" methods to remove the need for costly external storage space.

- Increase capacity through shifting specialized technical activities to hardware manufacturing
- Shift the costs of image design and delivery tasks to a low-touch predictable-service model
- Achieve efficiency gains by greatly reducing your deployment time, user downtime, and overall deployment cost

Customization can be performed on a per user/system and end-user basis. The final solution includes a customizable deployment wizard – with your organization's branding – that completely automates manual install steps when your systems are first deployed. Zero-touch deployment is achievable because the number of touches required to configure the PC is drastically reduced.

## A MODULAR AND SCALABLE DEPLOYMENT SOLUTION

### HOW TO REDUCE YOUR DEPLOYMENT TIMES

With Lenovo's Automated Deployment Services you can reduce your technician's touch time to a few minutes or to zero. In the chart below, you can see that the more tasks you move into manufacturing and processes you automate, the greater you have freed up your technicians' time to focus on other activities that produce greater business value.

DEPLOYMENT FUNCTION	REQUIRED DEPLOYMENT TIME (MINUTES)	FIRST BOOT SERVICES PHASE	DEPLOYMENT WITHOUT LENOVO'S MFG IMAGE LOAD OR FIRST BOOT SERVICES	DEPLOYMENT WITH LENOVO'S MFG IMAGE LOAD	DEPLOYMENT WITH LENOVO MFG IMAGE LOAD AND LENOVO'S FIRST BOOT SERVICES	DEPLOYMENT WITH LENOVO MFG IMAGE LOAD, FIRST BOOT SERVICES AND AUTOMATED DEPLOYMENT
Image Load to Disk Drive	30	Phase 1	DEKSIDIE ENGINEER	DEKSIDIE ENGINEER	MANUFACTURING	
Run Microsoft® Sysprep Process	20	Phase 1			FIRST BOOT SERVICES	
Install AntiVirus Software	5	Phase 1				
Install LANDesk/SCCM Software	5	Phase 1				
Install Additional Common Applications	10	Phase 1				
Encrypt Drive	180	Phase 1				
Shutdown	1	Phase 1				
Deployment Menu Interview	2	Phase 2			USER SELF INSTALL	
Join Domain	2	Phase 2			ADVANCED DEPLOYMENT SERVICES	
Install Specific Applications	10	Phase 2				
Restart System for End-user Use	2	Phase 2				
Migrate Data and Settings	180	Phase 2				
<b>TOTAL DESKSIDIE ENGINEER DEPLOYMENT TIME</b>			<b>267 MINUTES</b>	<b>237 MINUTES</b>	<b>16 MINUTES</b>	<b>0 MINUTES</b>
<b>DEPLOYMENT TIME SAVINGS*</b>			<b>0 MINUTES</b>	<b>30 MINUTES</b>	<b>251 MINUTES</b>	<b>445 MINUTES</b>
*This time savings example varies by customer depending on their solution.				<b>GOOD</b>	<b>BETTER</b>	<b>BEST</b>

Lenovo Automated Deployment Services are modular, flexible, and scalable to meet your unique needs. These solutions will support your goals of reducing your operational costs through efficiency gains achieved by greatly reducing your deployment time, error rate, user downtime, and overall deployment cost.

Lenovo's Automated Deployment Services are part of a comprehensive portfolio of Lenovo's award-winning services that support the entire lifecycle of your PCs. For more information on this, or other service offerings, please contact your Lenovo Sales Representative or visit [www.lenovo.com](http://www.lenovo.com).

**Lenovo**™ Services