



Information Brief

Image Consolidation with IBM ImageUltra Services

Simplifying image management

The challenges:

- *Software image management and migration are among information technology professionals' toughest problems.*
- *New hardware, upgraded operating systems and applications, and users' changing needs are responsible for most new software "loads" or images in large enterprises.*

The solutions:

- *IBM ImageUltra Services are designed to make deploying new machines much simpler.*
- *Streamlining systems deployment can also improve productivity by reducing end user downtime during transitions, helping to save time and money.*

One of the newest and most revolutionary IBM services now offered, Image Consolidation with IBM ImageUltra Services, is made possible by new technologies developed at IBM. This information brief outlines three of these IBM imaging technologies: DOE, or Dynamic Operating Environment; HIIT, or Hardware Independent Imaging Technology; and Software Delivery Assistant (SDA). By choosing IBM ImageUltra Services, IT managers can significantly reduce the time and effort required to deploy and manage new software images across organizations large and small.

These exciting new approaches to hardware and software technologies may well revolutionize the way rollouts and migrations are approached and managed. At present, Image Consolidation with IBM ImageUltra Services is available exclusively through the IBM Imaging Technology Center.

It is well known that maintaining up-to-date images is an expensive, time consuming problem in most large enterprises. After all, each individual PC model has its unique hardware specifications, and each user has specific requirements for applications and a Microsoft® Windows® operating system software version.

When image management is considered for a single machine, the problem is fairly simple. But multiply the equation by hundreds or thousands of machines and the permutations become extremely difficult to manage.

That's because each combination of hardware drivers, operating system and application software, plus language and/or geographic requirements, requires an image that must be developed, tested, managed, maintained, backed-up and documented for every different hardware platform.



Obviously, the benefits of new technologies or updated application features are lost if the enterprise cannot deploy a revised image onto new platforms in a timely fashion and without unnecessary downtime for end users.

The current approach: one image and limited options

Today's common solution to gain some measure of efficiency for large enterprises is "cloning" a single image with lowest common denominator hardware support. This means, for example, developing a specific image for a specific platform and hoping that it will be applicable as updates are made to both hardware and software. And enterprise factors such as different corporate divisions, different geographies and different software licensing arrangements add complexity to this single image approach.

While a single cloned image can help achieve some efficiency, it is still hardware dependent and a monolithic, "all or nothing" entity.

A new idea: modular images

By separating the hardware driver component from images, the image management task becomes a bit easier. Instead of using a static image for two or three years—and continuing to use the same older level of hardware despite the availability of newer technology—an enterprise using IBM ImageUltra Services is now free to buy new machines as they are announced since the hardware drivers can be split from the basic operating system and application software image.

Another possibility with modular images, separating the operating system component, provides further benefits for the enterprise. Once the hardware-dependent drivers can be detached, then the operating system component becomes easier to update with less impact on users' productivity. And new operating systems allow new, more powerful applications to be loaded as part of the image, again without being limited to a single image.



Software Delivery Assistant (SDA)

Software Delivery Assistant, or SDA, is a software tool that allows IT staff to consolidate and manage different images and applications across platforms in the company.

Using SDA, IBM customers can independently manage the application loads for different end user categories in a much more efficient way, allowing faster updates and shorter delivery time frames for projects. The company can load all the applications that exist within the company and then selectively install only those applications that are most appropriate for the specific user.

Selectivity is achieved by using a database of installation scripts that are executed based on the end user's selections. The selection information can be supplied prior to installation and confirmed upon delivery. Or the information can be driven by an individual's answers to a set of questions that then drives the installation process.

The installation scripts not only install the right mix of software, they can also remove any unnecessary software that was originally loaded as part of the "master image." Having all applications locally on a hard drive for installation helps reduce the burden on local area networks or server-delivered image loads. In the past, remote users may have been forced to use a dial-up connection for image downloading. Now they can enjoy the speed and simplicity of a locally-based data image.

Dynamic Operating Environment (DOE)

To further enhance the capabilities of SDA, IBM recently announced a complementary technology called Dynamic Operating Environment, or DOE. This technology tool allows an IT organization to consolidate Microsoft Windows operating system variations and languages into one master image that includes all of the necessary applications. The technology also provides users with an interface so that they can individually select the language, options and applications that are relevant to their job. Thus, users end up with an image tailored to their individual needs without placing the burden of creating numerous different images upon the IT department. The cost savings that DOE offers should only increase with the size and complexity of the organization.



Now, with SDA and DOE in place, each machine can get an image that contains the languages, operating system choices and the software applications in use throughout the company. After the end user makes a selection from their company's customized menu, the machine installs the right software, in the right language and deletes all the unnecessary, uninstalled files—with no IT staff required at the user's desk.

Hardware Independent Imaging Technology (HIIT)

Perhaps the most revolutionary breakthrough in this arsenal of migration weapons from IBM is Hardware Independent Imaging Technology, or HIIT. Hardware independent images have long been sought after in the world of enterprise data image management.

HIIT is based on technology (patent pending) that intelligently picks the right hardware device drivers and Microsoft Windows operating system level options to be installed. It "looks" at the information supplied on HIIT-enabled IBM ThinkPad® notebook and NetVista™ desktop computers and knows which drivers should be loaded.

This one master image can contain virtually all applications (both off-the-shelf applications as well as most company-specific, custom-developed applications), the Microsoft Windows operating system variations and the major language versions in use by the company. At last, very nearly every variable of the software image has been consolidated and the installation process can be truly automated. This one image can take advantage of the latest developments in technology without the need for constant modifications. Now new computers can be used to their full potential.



Another feather in the IBM cap

Since the invention of the PC by IBM 20 years ago, the company has always worked to set itself apart. Today IBM continues to innovate and improve to create a better e-xperience. By incorporating new technologies and features into ThinkPad notebooks and NetVista desktops, IBM has given users plenty of reasons to choose IBM. With the introduction of such exciting image consolidation and migration technologies as HIIT, DOE and SDA, large enterprise users especially have new, tangible reasons to choose IBM systems. Award-winning service and support, along with a reputation for quality, also set IBM apart.

This is an excellent time to select time-saving, productivity-enhancing ImageUltra Services from IBM. These new technology services may finally liberate companies from the complexities of image management and deployment.



For more information

Services home page ibm.com/pc/services

ThinkPad home page ibm.com/thinkpad

NetVista home page ibm.com/netvista

To locate an

IBM Sales Specialist: 1 800 IBM-4968 US; 1 800 IBM-2255 Canada

IBM reserves the right to change specifications or other product information without prior notice. This publication could include technical inaccuracies or typographical errors. References herein to IBM products and services do not imply that IBM intends to make them available in other countries. IBM PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions; therefore, this disclaimer may not apply to you.

IBM, the IBM logo, NetVista and ThinkPad are trademarks of IBM Corporation in the United States and/or other countries. Microsoft and Windows are trademarks of Microsoft Corporation. Other company, product and service names may be trademarks or service marks of others.

© Copyright IBM Corporation 2001

IBM Personal Computing Devices

U.S.A.

GK20-5871-00