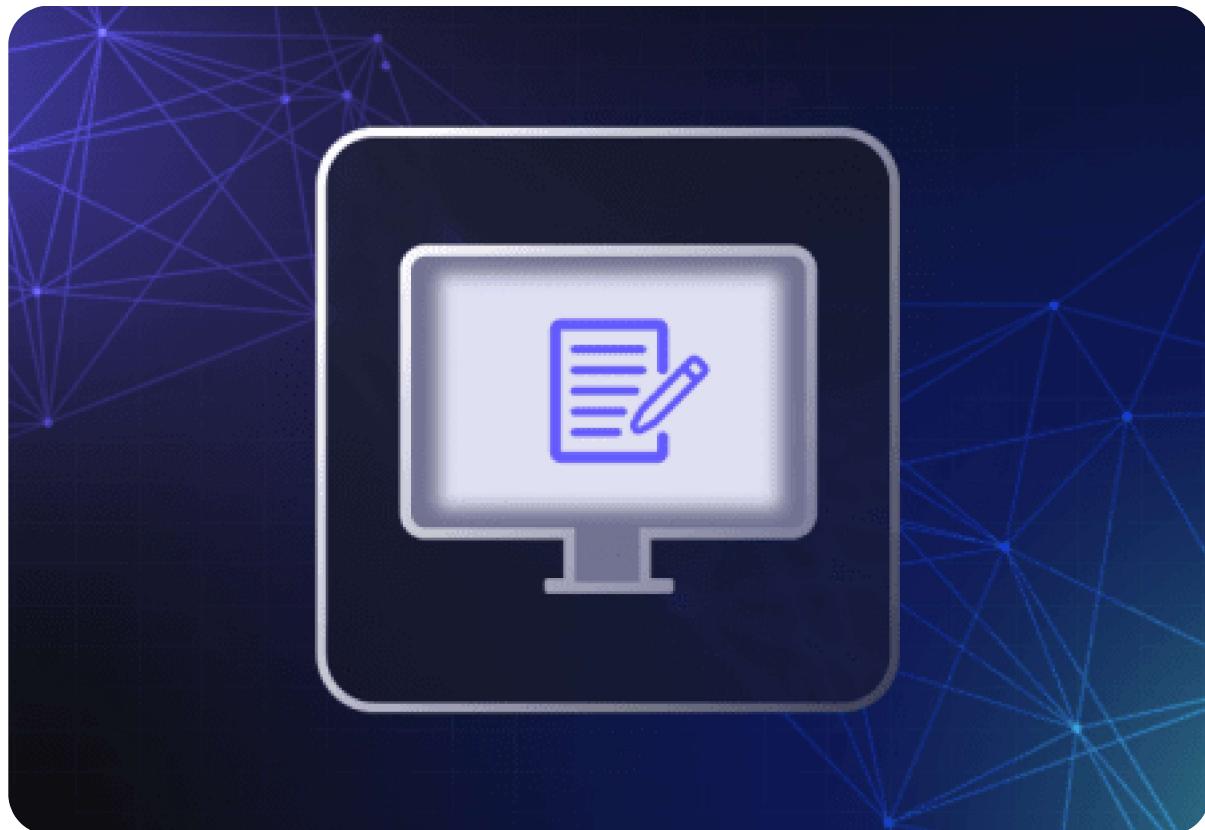


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# What is computer imaging?

**Joanne Yip**

Updated September 7, 2023

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settings.

Two common types of computer imaging are sector-based imaging (or disk cloning) and file-based imaging, which gives you more flexibility. And don't let the naysayers fool you: Computer imaging is crucial if you want to ensure device security and performance within your organization. We'll take you through the different kinds of computer imaging and why it's so important.

## Two common types of computer imaging

In general, there are [\*\*two common approaches\*\*](#) to computer imaging.

### Sector-based imaging

Sector-based imaging (often referred to as “disk cloning” or “cloning”) involves creating a golden image that’s an exact clone of a computer’s hard disk containing the OS, drivers, and software — and applying that disk image to an identical device.

One drawback of this approach is that you would need to create and maintain a golden image for every single hardware model and, in some cases, department-specific software within your environment. That’s a hefty investment in terms of money and storage space for all that additional equipment.

### File-based imaging

In contrast, file-based imaging is a more flexible approach. You can use a [\*\*virtual machine\*\*](#) to create images consisting only of the unique operating system files and software you want — instead of the reference computer’s entire hard dr

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you can easily streamline workflows and maintain a smaller image library.

## What is a golden image?

A golden image is a preconfigured template of the contents on a reference machine's hard disk or virtual disk. Also known as a master or base image, this "captured state" of the reference machine contains the operating system files along with a predetermined set of software and settings.

By deploying a golden image to user endpoints, you ensure that devices are consistent and compliant across the organization. You also save time since you can deploy a golden image to multiple computers instead of manually configuring individual devices.

## Advantages of computer imaging

Computer imaging offers some major advantages. Making sure that your organization's computer systems run smoothly and securely is a lot of work. Computer imaging can help you to increase efficiency, reduce user downtime, and keep endpoints secure and productive.

## More efficient PC lifecycle management

Devices set up with the same corporate OS image start from the same known, clean state. This results in more consistency and quality control, leading to less ambiguity when similar issues occur across machines.

In the long run, it translates into more productive PC lifecycle management, greater help desk efficiency, and lower operational costs. IT teams can use computer imaging to quickly and easily push software updates and configurations to endpoints.

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- Hardware rollouts
- Personnel changes, like [onboarding and offboarding](#) and role transfers
- [Remote endpoint management](#)
- [Windows migrations](#)
- PC break-fix
- [Lab refreshes](#)

## Better endpoint security

OEM computers often come preloaded with undesirable bloatware, which can leave traces behind even after you uninstall it. Very often, they lack the latest OS media, resulting in security vulnerabilities that may go undetected or unresolved. Issues like these can increase a device's exposure to possible [cyberattacks](#). Deploying a standard, up-to-date corporate system image to new devices can help to reduce such cybersecurity risks for a more secure endpoint environment.

## Compliance management

For heavily regulated industries, like banking and finance, computer imaging can be a useful and efficient way to meet strict security and compliance requirements. New York-based investment firm [Brean Capital](#) follows a stringent data sanitization process, carefully reimaging devices when employees leave the organization.

## How do you deploy operating system images?

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## Offline

Offline deployment refers to the process of deploying an image to a computer that is not connected to the local network or the internet. This could be because the network connection is unstable or unavailable (in air-gapped government and military organizations, for instance). Deployment is done via USB or other optical media that contains the necessary OS image, drivers, and software.

## Online deployment via local networks

Online deployment via a local office network is one of the fastest, most reliable ways to deploy images. Through the local network, you can connect to a file server, having it serve as a centralized image repository. At the same time, you can take advantage of your local network's speed and performance. Online deployment via a local network also allows for larger-scale deployments in scenarios like hardware rollouts and lab refreshes.

## Over the cloud

You can also deploy OS images and software via the internet. SmartDeploy, for instance, has out-of-the-box integration with third-party cloud storage providers like Box, Dropbox, OneDrive, and Google Drive. You can securely deploy Windows images, applications, and driver packs using your corporate cloud storage account. Users don't even have to be connected via VPN or on a corporate network.

## Is there free computer imaging software?

Yes, there is. But free computer imaging software like [Microsoft Deployment Toolkit](#) or [Clonezilla](#) doesn't come with any technical support to use and may save on

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# How do you choose the right computer imaging software?

Without efficient [\*\*computer imaging software\*\*](#), imaging computers can be tedious. To choose the best imaging platform for your company, consider these factors.

- Do you support different computer hardware models and different user groups?
- Do you support remote endpoints?
- Is the solution scalable?
- Can you use standard file formats, like .WIM?
- Can you easily maintain and update your system images?
- Is there technical support?

We know it's tempting to forego computer imaging and simply configure the preinstalled operating system on devices with a tool like [\*\*Windows Autopilot\*\*](#), for instance. But it's just not worth the risk to endpoint security and performance. And with a computer imaging tool like SmartDeploy, it's easier than you think to build and deploy custom system images to on-prem or remote Windows machines. Learn more in our [\*\*live demo\*\*](#) or dive right in with a [\*\*15-day free trial\*\*](#).

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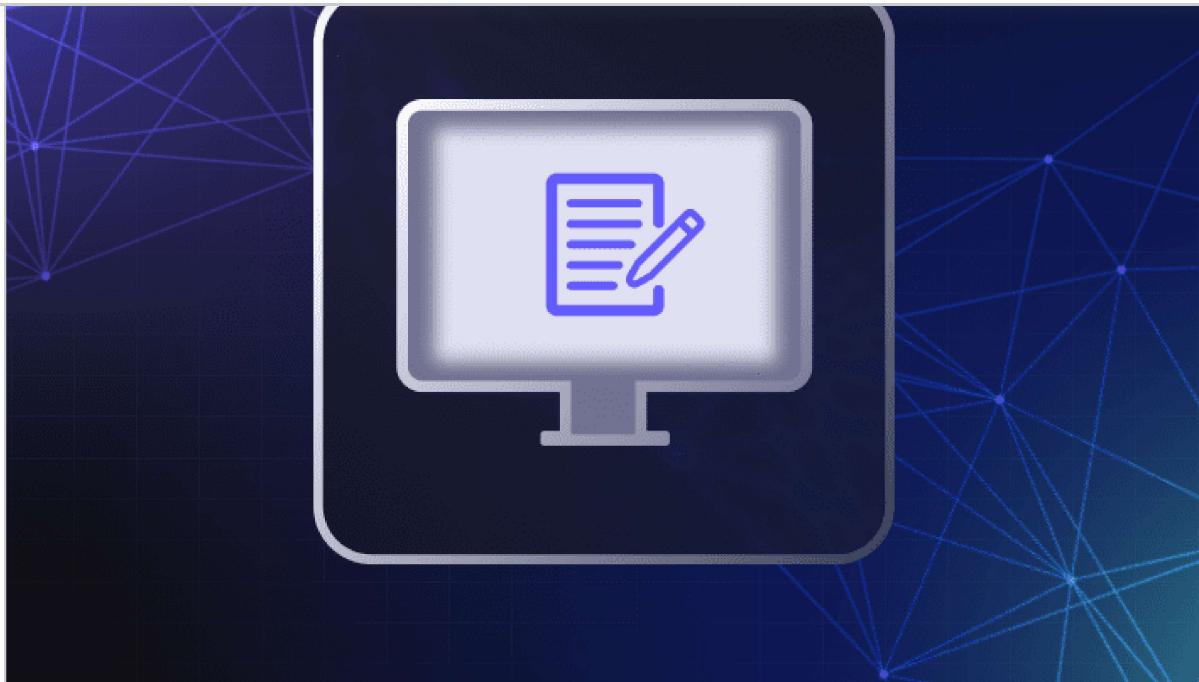


## Joanne Yip

Joanne has always loved the impact that words can make. When she isn't typing away in the world of sysadmin, Joanne loves hiking with her husband and dog, true-crime podcasts, and dreaming of her next scuba diving adventure.

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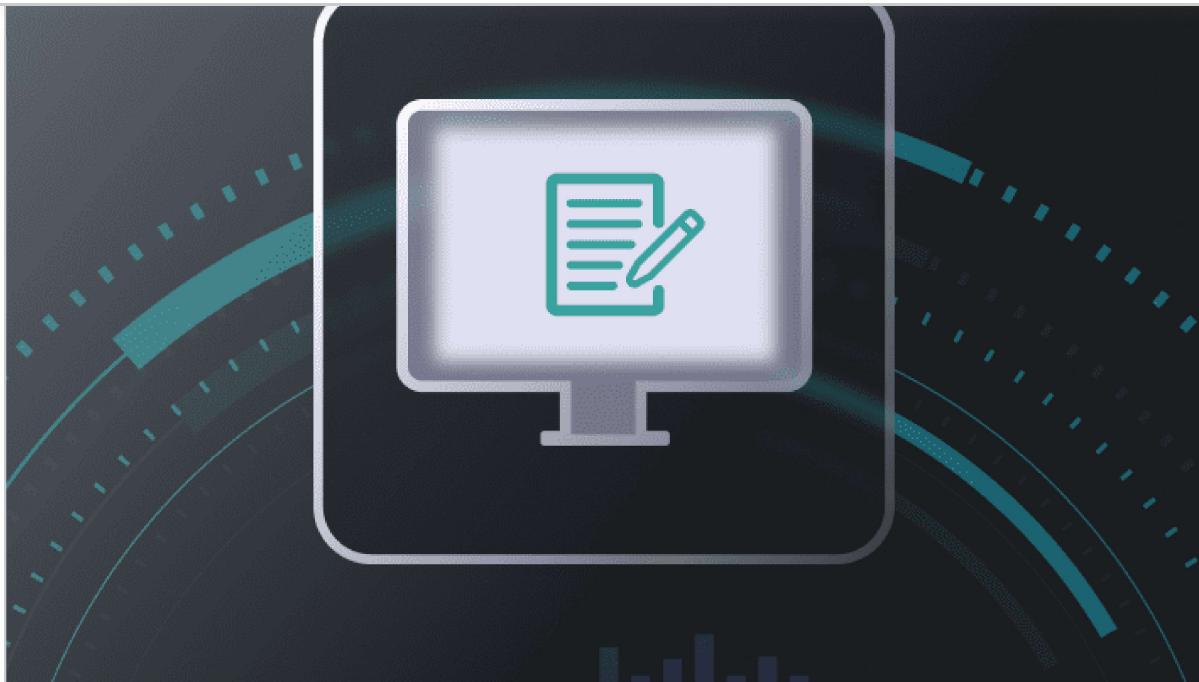
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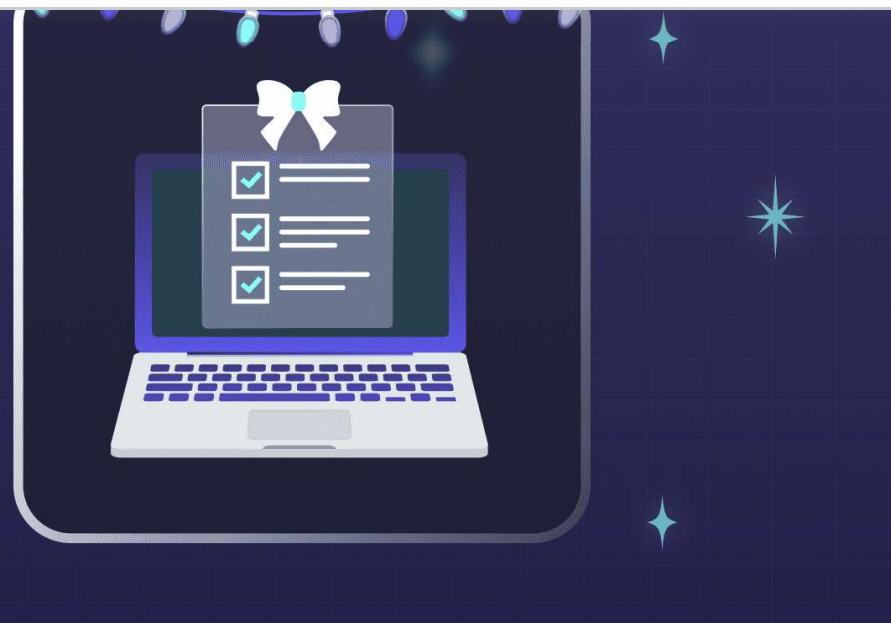
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