



The US Department of Defense maintains application security and eliminates software conflicts when deploying applications to locked-down desktops

In one of the US Government's most secure desktop environments, applications can be deployed consistently across any Windows environment in record time.

HIGHLIGHTS

Challenges

- Run a wide range of applications across a mix of locked down Windows machines
- Install code components without requiring administrator rights
- Deploy and run applications to machines via the Intranet
- Ensure advanced applications run exactly as designed

Results

- Increased application and desktop security by eliminating installation
- Faster, easier to deploy to locked down desktops.
- Eliminated installation conflicts that previously ran as high as 20%
- Slashed regression testing by 70%
- Consistent, flawless end user experience



From its headquarters at the Pentagon in Washington, DC, the Office of the Secretary of Defense helps the Secretary plan, advise, and carry out the nation's security policies as directed by both the Secretary of Defense and the President.

THE CHALLENGE

Working for the United States Secretary of Defense, this application development department creates custom applications for advanced data analysis. Networks are secured and computers locked down so end users don't have administrative privileges to install applications or register code components. This presented a challenge for the group, because the applications had to run flawlessly, regardless of the Windows version, which varied from Windows 98 to XP. The applications needed to be able to run from the secured Intranet or the computer without installation, and give the end user a consistent and polished experience.

THE DEPARTMENT OF DEFENSE REQUIREMENTS

The key challenges for application deployment had to be addressed: 1) run without installation 2) eliminate DLL registration conflicts that were occurring because of the locked-down desktops. The advanced applications meant rich client side functionality was a necessity so Java was considered. However, this still required the correct JRE to be installed on a desktop which wasn't a guarantee on the range of Windows machines. Traditional installation tools, such as InstallShield were considered, but these still required installation permissions for the code components, which wasn't possible on the locked-down computers. For Harvey Gilbert, DOD System Architect, installation as usual was not an option. "We needed a way to deploy our applications that was really, well, a non-deployment. We were spending too much time testing and tweaking our applications for each Windows version, and

still had installation failures about 20% of the time which required extensive, one-off troubleshooting, and frustrated the end user.” The solution also had to be flexible enough to work with any framework or code library that the application might be developed in.

THE SOLUTION

The DOD chose Thinstall to address the demanding deployment requirements, using it initially for 12 applications. The applications were developed in a range of code frameworks and third party libraries including legacy applications built on Microsoft Access 97, Java, Visual Basic, OpenSource, and .NET. Later, Thinstall was so successful with the customer applications that it was broadened to encompass packaging commercial applications that were not able to be installed on the locked-down desktops.

Using Thinstall with the first application took only a matter of days and impressed Gilbert as “it just worked, right from the beginning. The time savings were immediate.”

THE RESULTS

Comments Gilbert, “Thinstall enables our applications to be run without any dependencies, across any Windows platform. We don’t have to consider

what other applications may be running on the target machine or if there will be a conflict when a code component needs to be installed. We don’t have to worry if something will be missing or how the application will work for the end user. The time savings and consistent quality of user experience is critical to us. The applications run every time, on any machine, as we intended them to.”

The DOD saw immediate results in reducing time to deployment while improving the user experience:

- **Eliminated installation conflicts.** Installation failures for DLL conflicts ran as high as 20% and were totally eliminated.
- **Secured applications.** Because Thinstall packaged applications run in an isolated environment without extracting or installing data files and registry keys, setting and data files are not visible to the user and cannot be tampered with.
- **Slashed regression testing by 70%.** Applications no longer have to be tested in every environment or with every other application. Releasing an application went from weeks to hours.
- **Maintained legacy applications.** Some of the older applications needed to be run on the newer Windows platforms. With Thinstall, all the needed code components are packaged into a single EXE, so it doesn’t matter what the OS has or doesn’t have installed.
- **No administrator rights required.** In an environment where only the basic applications are installed on a machine, running numerous custom applications would not be possible.
- **Secure sample data.** The applications often contain sample data that need to be prevented from being modified. Thinstall protects the sample data so the application can run consistently each time.

THE FUTURE

The DOD will continue to virtualize more applications, to more desktops within the department, with plans to expand the number of desktops where Thinstall is used in 2006. The department is moving to all locked-down Windows XP machines, with only Microsoft Office and maybe two other applications installed as the standard

“Thinstall ensures that applications are run flawlessly on demand, even on the most locked-down and secure desktop.”

Harvey Gilbert,
DOD System Architect

image. Applications will need to run on machines where nothing else is able to be installed, including legacy applications that won’t run on XP. Thinstall will enable all of the applications to run from a single EXE without requiring the locked-down XP machines to be modified. Moreover, more commercial applications will be packaged with Thinstall, and both these and the custom applications will be extended to run in the DOD’s Citrix environment as well. Boasts Gilbert, “Thinstall has enabled us to deliver applications faster and more efficiently. We no longer have to worry about the deployment step with our applications, nor have to spend time troubleshooting an individual machine. Thinstall ensures that applications are run flawlessly on-demand, even on the most locked-down and secure desktop.”



Thinstall, Inc.
22 Battery Street, Suite 703
San Francisco, CA 94111
415.274.2558

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