

# JETBLUE

Airline savings sky high with HP thin clients



## jetBlue®

"Our thin client solution is expected to save us millions of dollars over the next five years, while improving the customer experience."

—Pat Thompson, director of IT Operations, JetBlue Airlines, New York, N.Y.

**HP customer case study:** JetBlue cuts costs, prepares for growth with transition to HP thin clients

**Industry:**  
Transportation

### Objective:

Cut long-term costs for airport-based technology

### Approach:

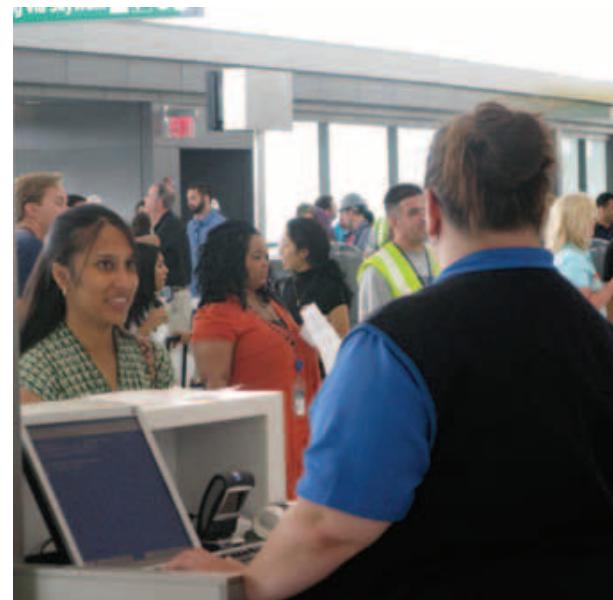
JetBlue Airlines deployed HP thin clients backed by HP ProLiant c-Class server blades

### IT improvements:

- Improved security
- Faster boot up, more responsive workstation performance
- Ability to administer thin clients remotely

### Business benefits:

- Cost savings projected at nearly \$5 million over five years
- Lower cost model for future expansion
- Longer projected lifecycle



Pat Thompson, director of IT Operations for JetBlue, has two priorities: (1) providing the airline's employees with "bulletproof" technology that will deliver a high-quality user and customer experience every hour of every day; and (2) making it as cost-effective as possible.

That's why he oversaw a huge technology refresh in more than 55 JetBlue airport locations, utilizing HP thin clients backed up by HP ProLiant c-Class server blades. "Our thin client solution will save us millions of dollars over the next five years, while improving the customer experience," he says. "It's a huge commitment that we consider critical to our future success and in the middle of it all, HP made its own major investment in thin client technology. That showed us we had chosen the right partner."

# Customer solution at a glance

## Primary applications

In-airport technology

## Primary hardware

- HP Compaq i5520 Thin Clients
- HP Compaq i5530 Thin Clients
- HP Compaq i5720 Thin Clients
- HP Compaq i5730 Thin Clients
- HP ProLiant c-Class server blades

## Primary software

- Genuine Windows® XP Embedded
- Windows® Embedded CE
- Citrix Presentation Server
- Altiris Deployment Solution

## Low-cost requires high efficiency

New York-based JetBlue Airways, known for its low fares and free TV, believes it has created a new airline category based on value, service and style. The company serves 57 cities with 650 daily flights throughout North and Central America, and 10 international countries.

Thompson notes that the airline industry overall operates on thin margins. And JetBlue, as a low-cost airline, operates with even thinner ones. "Any opportunity to become more efficient and cost-effective is critical for us. We have to be very strategic about our technology decisions in order to remain competitive."

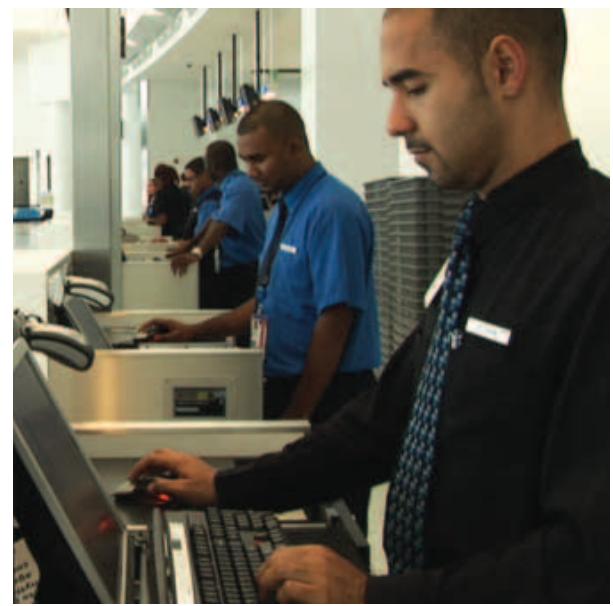
So in 2006, as Thompson looked to the future with projections of 5 to 10% annual growth and the need to periodically refresh airport installations served by "fat" clients, he didn't like what he saw. "In terms of maintenance and cost effectiveness, the fat client model simply wasn't sustainable for us," he explains. Thompson envisioned the number of remote workstations surpassing 2,000—all requiring patch management and application management, sometimes by hand. "It was going to get more and more expensive, and less and less effective for us as we continued to grow."

Thin client computing held promise, but until recently, the critical supporting technologies weren't mature enough to provide the highly reliable operation an airline demands. Then a few years ago, he says, everything came together. Broadband penetration increased. Network reliability improved. Thin clients finally were positioned to deliver on their promise.

*"Thin clients allow us to lock down the environment to protect it from unapproved activity. Crew members can't unwittingly download spyware and adware."*

Pat Thompson, director of IT Operations, JetBlue Airlines

"We did extensive testing: load testing, user testing, packet-level network monitoring and more. We did live trials with user feedback. We didn't dare put out anything in which we didn't have a high degree of confidence."



Having achieved that confidence, Thompson pulled the trigger. He and his team unleashed a saturated deployment with JetBlue installing nearly 1,400 HP thin clients running Windows® Embedded CE and Genuine Windows® XP Embedded, to serve 12,000 JetBlue crew members. The thin clients are used at curbside, the ticket counter, the gate, and many back office locations within airports. All are supported in JetBlue's central data center by 25 HP ProLiant c-Class server blades using 64-bit architecture and running Citrix Presentation Server 4.5 (upgrading to XenApp) to deliver JetBlue's proprietary applications.

## \$5 million savings and counting

In planning the conversion, JetBlue first projected placing thin clients in only some mid-tier airports. That deployment would have saved more than \$2.5 million over five years. Instead, the company has opted for full deployment in all its airport locations, and operations are currently on track for projected savings of nearly \$5 million over the same period.

The largest savings are in software licensing, hardware deployment and maintenance. "With HP thin clients in place, we can now manage a much larger—and growing—environment without increasing our technical staff at all," Thompson explains.

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The projected cost savings don't include lowered energy use by thin clients. "Energy wasn't a driving factor in the original design of the project. But when we did our cost analysis, we factored that in," notes Thompson. Now energy savings are expected to cut costs an estimated additional \$500,000.

All too often, cost-saving measures mean compromises that leave employees grumbling, but not in this case. Employee users saw their log-in time cut from five minutes or more down to seconds. Their thin clients can go from power off to a logged on, fully functional desktop in about 30 seconds, Thompson notes.

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The reason: with a stripped down operating system, the workstations are no longer running sophisticated background processes. Instead, the thin clients are dedicated to a focused, specific set of tasks. And the "heavy lifting" in terms of processing is taking place back in the data center on ProLiant c-Class server blades.



The new thin client environment is also very secure. "Thin clients allow us to lock down the environment to protect it from unapproved activity," Thompson explains. "Crew members can't unwittingly download spyware and adware." The thin clients are instructed to perform a discrete set of tasks, and nothing else is allowed.

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*"Overall, we couldn't be happier. Moving to a thin client solution was the right thing for us to do, and HP was definitely the right technology partner to help us make it happen."*

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JetBlue is running with base-configuration, off-the-shelf HP thin clients. The HP Compaq t5520 and t5530 Thin Clients running Windows Embedded CE, for example, come with just 64MB of RAM and 128MB of video memory. That's plenty to run sessions with the blade servers running the company's proprietary systems.

Some thin clients are even used to stream video for computer-based training from JetBlue University (the company's internal training group). "Streaming video on a thin client can be challenging. But the ability of the Citrix server to send that stream directly to the video card on the HP thin client makes it work smoothly," Thompson says.

The HP Compaq t5720 and t5730 Thin Clients running Windows XP Embedded are used, among other places, for the large displays of arriving and departing flights. A single thin client will support dual 46-inch displays.

Thin client computing has been so successful in airports that a mandate has gone out to deploy it elsewhere, throughout JetBlue's operations. The company uses the Altiris Deployment Solution to deploy and remotely manage the thin clients.

Thompson says a deployment of this size and strategic importance isn't just an IT initiative; it's a central business initiative. Technology staff must work closely with partners throughout the business to get feedback

and guidance, and promote the benefits internally. "Without that partnership, this change wouldn't have happened. Active participation of internal business partners and customers is critical," he notes.

Looking back, would he do anything differently? "Perhaps we could have started sooner," says Thompson. "But overall, we couldn't be more satisfied. Moving to a thin client solution was the right thing for us to do, and HP was definitely the right technology partner to help us make it happen."

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