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# Mac Attack! An enterprise PC shop switches to Apple

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**July 16, 2007** (Computerworld) It's little things like the small silver Apple logo on CIO Dale Frantz's crisp white shirt that signal the sea change in the works at Auto Warehousing Co. Over the next 60 days, AWC will begin systematically pulling the plug on all Windows-based PCs in its cavernous auto processing shop and power up Macs to execute virtually all of its revenue-generating operations. The move comes on the heels of a quiet wholesale replacement of Windows-based servers for data storage and Web operations, which are now running on Apple Inc.'s Xserve RAID machines.

"This is not a vengeance case," Frantz says, referring to his 2006 tangle with Microsoft over threatening letters from the vendor that made false accusations about unlicensed software.



Dale Frantz

Instead, AWC's new strategic enterprise technology plan is the direct result of proof-of-concept testing that indicates that the company can cut costs, increase system reliability and security, and provide expanded IT support services by porting a major

portion of its IT infrastructure to Apple. Extricating itself from its exclusive dependence on Microsoft is simply the cherry on top.

That's like handing out keys to the server room.

For Apple, which declined to comment for this story, the move represents a feather in its enterprise computing cap. It also gives the vendor a toe in the door of the Microsoft-heavy automotive industry. AWC is the largest full-service auto processing company in North America, with 23 sites across the U.S. and Canada.

"As a mainstream, big platform, we haven't seen a lot [of Apple] in automotive," says Gartner Inc. analyst Michael Silver. "Apple is still very niche-y. Its niches are in the media creation and the scientific communities."

**Auto Warehousing Co.**

**Business:** Largest full-service auto processing company in North America, with 23 sites in the U.S. and Canada.

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**Headquarters:** Tacoma, Wash.

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**Services:** Installation of new car accessories, such as alarms, air conditioning and luggage racks; preparation and loading of vehicles for rail and truck transport; body shop repair; dealer delivery; warehousing; logistics; export/import.

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**Volume:** 5.5 million cars a year.

**Key customers:** Hyundai, Kia, Mazda, Ford, Isuzu, Honda, Mitsubishi, GM, DaimlerChrysler

AWC's plan, to be announced at a July 29 managers meeting, calls for the retention of some Microsoft technology. AWC's main client/server software, VIPS (Vehicle Inventory Processing System), will continue to run on Microsoft SQL Server on the back end. "The SQL server runs well; it's a solid product. There's no business case to change that," Frantz says. But function by function, AWC will rewrite all VIPS client software in Java 6.0 or higher so it can run at the front end on Apple Macs. VIPS currently runs client software on Windows XP, which AWC will not upgrade to the newer Vista operating system.

"From what I've observed, Windows Vista is the same [as XP], but with prettier icons and a little prettier user interface," Frantz says. "At the end of the day, our users are not going to do their work any differently with Vista than with Windows XP."

But it will take 12 to 18 months to rewrite the VIPS client software to run on Macintosh machines, and Frantz doesn't want to delay the cost savings and efficiency enhancements tied to the migration to Apple hardware. So in the interim, AWC will continue to run VIPS on Windows using software from Renton, Wash.-based Parallels Inc. that lets Macs run Windows applications in a virtual environment.

### The Road to Here

AWC's IT staff has been testing this configuration along with integrating Apple servers into its Windows-based network for the past four months.

"We began down this road independent of Apple," Frantz emphasizes. "We bought some Apple gear and began to try to make it work on our own."

In late February, Frantz gave a MacBook Pro to senior programmer/analyst Robert Mullen with a simple directive. "Play with it for 30 days, and if at the end of the 30 days you don't like it, bring it back to me," Frantz recalls.

"I never went back," Mullen says. "And then I started begging for an Apple desktop."

Mullen also experimented with Linux as an operating system alternative to Windows. "I transitioned my full desktop from a Windows Vista enterprise desktop to a SUSE Linux desktop and was using the MacBook Pro as a laptop and SUSE Linux enterprise as my main desktop so we could see how well things worked," he explains.

In the end, system stability and available support were the deciding factors.

"We went out on the Linux boards to begin cultivating support, and the message we got back was that the Linux community would love to work with us and wanted to know how many man-hours of development we could put toward the overall Linux project," recalls Frantz. "That didn't give me a lot of confidence about Linux as the production environment for what we do." Meanwhile, the Apple testing was going extremely well. On the storage front, "I got off the Microsoft file store we were using and moved everything to the

Apple server, and it worked phenomenally,” says Mike Collison, AWC’s director of IS operations.

As for the VIPS application, Frantz says, “Windows on my Mac runs faster than any PC I’ve ever seen. It’s blazingly fast. One of the main things that stunned me is just how well the Mac hardware runs Windows.”

On the whole, “what we’re finding is this stuff just works,” says Frantz. “We’re at a point where we can deploy it” companywide.

In his own spacious office, Frantz has a PC running Vista stowed on a back table. “It’s pretty, but from a pure functionality point of view, I’m not using it any differently than I’m using Windows XP,” he says. So front and center on his desk is a 20-in. Apple iMac running XP in virtual mode.

### **No Staff Left Behind**

AWC’s 16 IT employees have also been training on the Apple hardware and operating system. Frantz emphasizes that he has no plans to change people because AWC is changing technology.

“We are not intending to leave anyone in the [IT] department behind as part of this development project. We’re going to be very, very careful as we step forward that we do everything to bring everyone along,” he says.

“These folks have dealt with Windows-based PCs and servers for their entire careers,” notes Collison. “But now, all of our techs are using Mac PowerBook Pros to support the enterprise. It’s a fairly fast learning curve.”

The group has worked out a series of early integration glitches, including streamlining virtual private network connections and integrating firewall software.

Collison recalls a time when WatchGuard Technologies Inc.’s firewall software had “hung” and was snagging all access to AWC’s VPN. Using a MacBookPro and VPN Tracker software from Equinix USA Inc., the network manager logged on and solved the problem in minutes. “He got it restarted, and everything was good,” Collison says. “It was poetry.”

“You run up against a series of go or no-go decisions when you’re doing a proof of concept,” adds Mullen. “But there seem to be no major barriers to stop the show.”

Ironically, “where it gets fuzzy” is over the issue of licensing, says Frantz, who is meticulous about licensing records and software compliance. The question, he says, is, “What do you need to be legal if you’re running Windows XP in a virtual environment on Mac hardware? “We are running a copy of XP, so Microsoft deserves revenue for that,” Frantz acknowledges. “It’s just that it’s in a virtual workspace, so how do you handle the virtual workspace?”

A potential solution is to purchase and apply OEM licenses for Windows XP. This should allow AWC to legally run XP in a virtual environment on Mac hardware, according to the Microsoft OEM System Builder License that comes with Windows XP Professional software, Frantz says.

Still, to be sure, Frantz says he called Microsoft twice in May, requesting clarification on the licensing issue, but he has yet to receive a call back from the vendor.

Microsoft declined to answer questions for this story about licensing Windows to run in a virtual environment. After several requests, the vendor, through its public relations firm, referred customers to a Web site: [www.microsoftvolumelicensing.com](http://www.microsoftvolumelicensing.com).

Pressed for more, it offered this statement: “Microsoft has reassessed the Windows virtualization policy and decided that we will maintain the original policy announced last fall.”

As Gartner’s Silver sees it, another potentially fuzzy area is the return on investment that AWC can expect by switching from PCs and Windows to Apple hardware and its Mac OS X operating system. “I’m skeptical about the ROI and how much it will cost in the end,” says Silver. “Running Windows on a Mac is the most expensive way to run Windows,” he notes. “You have to buy the Parallels software, buy more memory and buy a Windows XP license. It’s not an inexpensive way to do things.”

But Frantz is crystal clear on the issue: "This is more of a strategic choice for the future. If we look toward a return on investment to Windows Vista, there is no direct return other than we continue business the way we always have. By investing in the Apple platform, we pick up additional functionality that we don't have today."

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