Progressive Insurance's Migration to Oracle Linux Is a No-Brainer

When you think of consumer insurance, the first thing that comes to mind might be the many TV commercials that promote the leading vendors' services. While these commercials comically depict the justification for having insurance or cheerfully pitch the value proposition of the leading providers, they say little about the sophistication of the IT infrastructure that delivers the services behind the marketing pitches.

In reality, a deep investment in IT powers the insurance industry. This investment makes it possible for insurers to support their customers and help them recover from losses ranging from minor automotive fender benders to devastating events caused by fire or weather. IDC interviewed Progressive Casualty Insurance Company—one of the major insurance companies in the industry—about its use of Oracle Linux. The sections that follow describe Progressive's story.

ENTER LINUX

According to Progressive's lead systems engineer, who develops IT strategies, fills solution architect roles, and oversees staffing the department with deep technical skills, Linux has become an important component of the organization's infrastructure since initial deployment around six years ago. The Linux infrastructure was first used for classic edge-of-network workloads but has evolved over time to take on increasingly sophisticated and critical workloads. Today, it is considered a primary workhorse for the company.

As in many organizations, Windows, with about 5,000 physical and virtual servers in use, still accounts for the largest overall volume. Meanwhile, Linux accounts for over 400 physical and virtual servers, and the company's use of Unix continues to contract, with only 5 Unix servers remaining today.

The bigger picture for Progressive, which has eased off of its previous bleeding-edge approach to technology adoption in favor of a leading-edge-of-mainstream adoption profile, is to continue a larger movement from Unix to Linux in parallel with a deepening of the commitment to an Oracle software stack.

Progressive's Unix-to-Linux migration is nearly done, and it has included some sophisticated migrations. The company had its Oracle Database 10g deployments on Unix, but as those databases were redeployed on Oracle Linux, the databases were upgraded to Oracle 11g. "We don't count it complete until both are done," notes the lead systems engineer.

Progressive has two Linux platforms, with some of the Linux instances running on IBM z/VM servers but the bulk of the instances running on x86 servers. Today, the company has 422 x86 Linux instances running on VMware hypervisors, made up of 131 physical and 291 virtual machines. The rate of virtualization for Linux remains lower than that for Windows, a common scenario that IDC finds in the industry today. In addition, about 75 Linux instances are supported on IBM z/VM servers. The mainframes are a carryover from the heavy dependence the insurance industry had on mainframes in the 1970s—a common companion platform IDC finds still in use among the insurance, banking, and other financial services industries.

ORACLE ENTERPRISE MANAGER: A NO-BRAINER

A couple of years ago, as Progressive's Linux investments were heating up, the company realized it needed to manage its Linux servers using the same best practices that are applied to other platforms, but the company did not have the BMC management agents needed to support its Linux installations. After considering multiple options for management, the company decided the right approach was to shift its investment toward Oracle Enterprise Manager for a simple reason: The same management tool that the company used to manage its Oracle Real Application Clusters (RAC) installations could also manage its Linux infrastructure.

"We had experience with that product; it is included with the Linux management subscription, so it was a no-brainer. We have the OS, the database, the application, the web layer, and the same management tool, and we have the same vendor. That is very powerful," explains the lead systems engineer.

Like many other Oracle Linux customers, Progressive began using Red Hat Enterprise Linux and made a broad decision to replace all of its Linux installations with Oracle Linux. As part of this initiative, the company produced an Oracle Linux image and began testing it—in particular, the performance of Oracle databases, notes the lead systems engineer. "When we were spinning up the infrastructure for the Oracle 11g infrastructure, we tested both the Oracle kernel and the Red Hat kernel. We got 15–20% better throughput on the Oracle kernel."

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> **John Dome**
> Progressive Insurance

KSPLICE: A GAME CHANGER

Progressive began with Oracle's standard-level support subscription, which was the same level of support the company previously purchased from Red Hat. However, the introduction of the Ksplice technology, which allows for applying Linux patches with no downtime, was a game changer for the organization. "So we targeted our development and production deployments—about 78% of our servers—for Premier Support," says the lead systems engineer. He notes that the support services dollars that used to be spent on Unix are used in part to pay for the Premier Support costs, with a net savings for the insurer overall.

Moving to Linux on x86 has not been without some sacrifices. These sacrifices include the integration, engineering, and one-stop shop for system support. As the lead systems engineer states, "I could go buy an AIX pSeries, and that integration is done by IBM. Moving to Linux on x86, where we see struggles, you absorb that integration effort. For some organizations, it is not minimal. And it compounds given the mix of apps you have and can compound given the sensitivity those apps have to the physical server, kernel, etc. We are trying to minimize doing those one-offs."

CONCLUSION

The lead systems engineer summarizes Progressive's experience as follows: "When I stack up Linux—and I have seen it for over 10 years—as the distributions go, [Oracle Linux] is a better engineered product. When you look at application guides, the way products are deployed, and validated configurations, Oracle has done a very good job of that. [And] Oracle has done a good job of validating hardware. We are very happy with the investments we have made." Of course, there is always room for some improvement, and he quips, "One thing I have asked Oracle about is the possibility of deploying Oracle Linux on the mainframe."

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