

## INSIGHT

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### FishWorks Could Be a Real Catch, if Sun Gets Out of Its Own Way

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Brett Waldman

Al Gillen

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#### IDC OPINION

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Sun recently unveiled a development project that is focused on serving a specific set of needs for IT shops. Developed under the code name FishWorks, where *Fish* stands for "fully integrated software and hardware," this technology appears to be positioned initially as a hardware/software solution rather than as a turnkey solution with an optional deployment form factor as a software appliance. In addition:

- ☒ In its current prototype format, FishWorks is a hardware/software solution that is designed to be used in supporting storage-oriented workloads. However, the goal of the project is to create a FishWorks "builder" to easily adapt Solaris to specific workloads.
- ☒ The basis for FishWorks is Sun's Solaris 10 operating system, which we see as a good choice for the groundwork of a software appliance given features such as DTrace and predictive self-healing as well as data management features incorporated within its ZFS technology. The Xen-based hypervisor will also be integrated soon into Solaris 10. In addition, the availability of Solaris 10 at no cost puts the price point in the right ballpark for use with an appliance.
- ☒ Although Sun has not yet revealed definite plans to commercialize the FishWorks project, it appears that any such plans might be used as a way to increase hardware volume. IDC believes that if Sun is determined to sell only its own hardware with this project, this decision would greatly limit the market opportunity and continue to feed the perception that Sun is a hardware company rather than a company building a greater ecosystem around its software and hardware products.
- ☒ IDC believes Sun's best chance for success with the FishWorks project is a multipronged approach. Where it makes sense for customers, by all means sell it on Sun hardware, but also make it available as a software appliance that can be used in an existing virtual infrastructure using Sun hardware and hardware from other OEMs.

## IN THIS INSIGHT

This IDC Insight analyzes Sun's FishWorks project and the affect it might have on the software appliance market. This Insight looks at the market opportunities available and possible strategies Sun might utilize in bringing FishWorks to market.

## SITUATION OVERVIEW

On February 6 at its annual industry analyst conference, Sun unveiled a prototype appliance code-named FishWorks. The first FishWorks project demonstrated was a NAS appliance leveraging Solaris 10's ZFS technology. FishWorks has been in development for about a year and is being developed by the same team that created DTrace.

The idea behind FishWorks is to solve a special-purpose problem with a general-purpose solution at a disruptive price. Sun believes it can achieve this goal by leveraging its own general-purpose software and hardware, especially Solaris 10.

Although FishWorks is still under development — and Sun has not formally committed to commercializing the project — the company has created a set of criteria that will be persistent among all FishWorks appliances, implying that if this project goes forward, it could lead to not just a single appliance form factor but rather, potentially, a whole collection of solutions.

These specifications include use of a secure Web-based management console and ensure an appliance-quality experience. Sun explains the appliance-quality experience as a turnkey experience with deployment in as little as 15 minutes, a single and easy-to-use upgrade experience with rollback capability using a stripped-down version of Solaris 10 for the most secure experience, and an ability to connect to a back-end infrastructure.

Sun has a history of creating appliances, and this project could become the standard way of creating new versions or completely replacing these existing appliances. Almost any standard appliance could be a candidate for FishWorks, including security, networking, database, Web server (SAMP – Solaris, Apache, MySQL, Perl/PHP/Python), and VoIP, to name a few.

IDC defines software appliances as software products that integrate operating system and application functionality into an easily managed composite package that is deployed aboard industry-standard client or server hardware, either on a virtual machine or directly on the hardware.

One of the advantages of packaging a software appliance inside a virtual machine versus directly on the hardware is the ability to consume readily available, unused resources. This approach also has the residual benefit of reducing power consumption because it does not require additional hardware and increases the heat output only marginally. IDC predicts that in 2007, \$0.50 will be spent on energy for every dollar invested in new enterprise hardware. With such a large percentage of IT

dollars being spent on energy, Sun would be limiting its total available market if it did not offer FishWorks in a virtual form factor.

## FUTURE OUTLOOK

The *Fish* in FishWorks stands for "fully integrated software and hardware," which implies that Sun, if it does in fact commercialize the project, will use what is essentially a software technology to try to sell more hardware, integrating the two together.

Although there will surely be use cases where this approach is appropriate, particularly for a NAS appliance, IDC believes that Sun could and would limit the potential business upside if it decided to not allow the software to also be made available for deployment aboard a virtualized environment. Given the company's aggressive approach with open sourcing Solaris and other key software technologies, and the fact that it maintains that the growth of a healthy ecosystem is fundamental to its approach long term, such software availability would seem to be a natural extension.

As Sun currently describes its FishWorks appliances, the software layer maps closely to IDC's definition of a software appliance, yet we do not believe that Sun currently sees the market opportunity that is associated with offering FishWorks appliances in component form as well as in preintegrated form. If Sun plans to push only its hardware agenda, the addressable market will be limited to the hardware appliances market. However, if Sun chose to leverage virtualization technologies, whether from VMware or from Xen, the company would be able to address the software market as well.

One interesting scenario briefly discussed by Sun is using a single box to host several software appliances. These appliances could be based on Solaris or even Linux or Windows because Solaris will soon include Xen-based virtualization and, as such, will have the facilities to become a powerful software appliance host.

This scenario would allow Sun to sell hardware but not limit the boxes to a single function. However, there will also be cases where enterprises will already have a VMware or Microsoft Viridian infrastructure in place, and they will want to leverage this infrastructure. In this scenario, wrapping a FishWorks appliance in a virtual machine will make the most sense.

Sun also implied that there is a possibility it would open source a FishWorks appliance builder. This move would make a lot of sense for the company because it would help get a lot of developers working with Solaris, which in turn could help Sun build out its Solaris ecosystem.

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