

What would be the role of Linux in web-based operating systems?

Web Platforms



Could Mozilla's announcement of the Boot to Gecko roadmap, along with the continued development of other web-based operating systems, make the Linux distro you're running less important than the desktop environment? *By Brian Proffitt*

One of my earliest exposures to the real future of web development was at a Netscape conference in Manhattan, where I remember one of the company executives explaining that very soon, the operating system would not be the platform on which applications would be written, but rather the browser.

That was in 1996. At the time, I had very little conception of what the Netscape people were describing. I don't think I was alone; it would be another half decade or so before the idea of web-based apps would even start to be seen and, even then, in the form of "active" pages and "dynamic HTML."

The idea of a truly web-based platform for applications hasn't quite taken off even today. The Linux-based Chrome OS is a near thing, and although many apps are indeed running from the web, native apps can still be installed.

As the journey toward a web-only platform continues – if that's where we are heading – the question becomes: What will be the role of Linux within such an environment? When the Mozilla Foundation released its 2012 roadmap for Mozilla-related products earlier this year, the question became pertinent again.

The news from Mozilla was that the foundation and its commercial subsidiary, Mozilla Corporation, will create their own mobile platform within a project known as Boot to Gecko. The roadmap described the new platform:

A truly Web-based OS for mobile phones and tablets would enable the ultimate in user choice and developer opportunity, both from a technology and an ecosystem point of view. Boot to Gecko is a project to build a OS that runs HTML5, JavaScript and CSS directly on device hardware without the need for an intermediate OS layer. The system will include a rich user experience, new APIs that expose the power of modern mobile phones through simple JavaScript interfaces; a privilege model to safely and consistently deliver these capabilities to websites and apps with the user in control. Boot to Gecko leverages BrowserID, the Open Web app ecosystem and an identity and apps model that puts users and developers in control. [1]



The Boot to Gecko roadmap goes into more detail, but needless to say, this is Mozilla finally trading where Google, with Chrome OS; Canonical, with Unity on Ubuntu; and most recently the Plasma community with the Vivaldi tablet have already walked: the creation of a standards-based platform that relies on robust web applications (in varying degrees) more than native-run apps to provide the user experience.

This is a step on a journey that's been happening for a long time, and it is the natural result of commoditizing the operating system. Specifically, the presence of Linux is so accepted as a given within a product offering that the operating system no lon-

ger becomes an important part of the total solution.

These shifts to a mobile platform represent a huge change for the Linux ecosystem, which sounds scary at first: Linux distributions are far less important in mobile spaces. This has been happening for a while now, and the trend will continue because all of these mobile Linux-based devices and platforms will continue to be churned out. Because of the emphasis on HTML5 and web application development, no one will care what specific platform is running underneath.

Distributions are becoming less important. Consider, for example, the importance now being placed on the desktop environment running on top of the given Linux distribution in question, rather than the distro itself.

More and more, it's no longer about "I run Fedora" or "openSUSE rocks"; now the conversations have shifted to things like how much better Cinnamon is than Unity, or how Trinity outperforms KDE, or vice versa.

I believe that we are heading for a time when Linux flavors will be identified by environments, not distributions.

When so many application functions can be duplicated by web services on the browser or through apps that plug right into the web APIs, the look and feel of the interface will become more important – more so, I think, than the Linux distribution of packages underneath.

By the way, this change could present some messaging problems for the big commercial Linux vendors: If the distribution underneath becomes less important, then Red Hat Enterprise Linux (RHEL) and SUSE Enterprise Linux Server might soon have a serious fight on their hands. In the past, one of the big differentiators has been that these "big" distros provide solid infrastructures in which business applications can be developed. If this Linux-is-Linux-is-Linux idea takes root, that will undercut a big marketing tool for Red Hat and SUSE Linux.

I think we have been seeing the companies' reactions to this for a while, in that both Red Hat and

SUSE have been pushing their offerings in virtualization, cloud, and appliance space as their special sauce.

If the operating system becomes just a background component that runs more web than native apps and app development for the platform itself becomes de-emphasized, then the obvious question becomes: What does it matter if it's Linux running on the operating system layer?

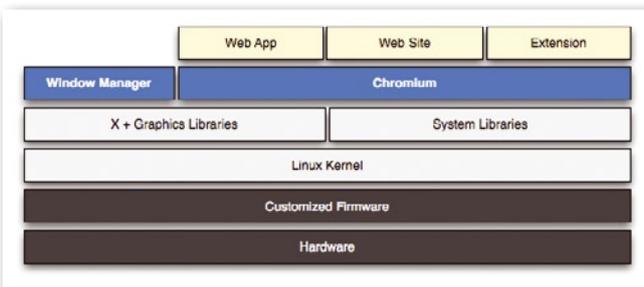
In the past, Linux's stronger application ecosystem could hold off such attacks, but if more apps are enabled on the web, then native apps become less of an issue – not to mention it's getting easier and easier to port apps across to other Unix OSs all the time.

This is a lot to assert on the basis of an announcement from Mozilla and a lot of futuristic visions from its predecessor Netscape, but although such a fade into the background could be seen as a bad thing, ultimately, this is the path Linux is supposed to tread.

Think of it like cotton. It's a material that's become so pervasive in daily life that it's hard to imagine a world without it. And, although no one thinks much about cotton, that does not minimize its importance in society.

The same might be true for Linux someday. It will be the fabric that weaves through all of technology – a vital component that people won't give a lot of thought to, but one that is customized easily and can be reworked to serve whatever function is needed.

That's the future of Linux as web development becomes more robust and powerful. Is it flashy? Perhaps not. However, once upon a time the light bulb was a revolution, too. Someday, all successful revolutions will become part of the everyday. ■■■



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[1] B2G roadmap: https://wiki.mozilla.org/Roadmaps#Open_app_ecosystem_-_Develop_and_distribute_apps_on_your_own_terms