Study of Internet or Web Based Operating Systems

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1. INTRODUCTION

Talk of an Internet OS began to surface in 1995 as the browser war started heating up between Microsoft and Netscape. In response to the limited capabilities of HTML at the time, Microsoft began developing an online content authoring platform that would be based on distributed OLE (Object Linking and Embedding) which it codenamed Blackbird. Using OLE, applications put on the web would contain their own processing logic, so would act similar to applications in a typical desktop environment.[1] Immediately, there were concerns that this would tie the web to proprietary Microsoft technology that wouldn't be guaranteed to run across different systems.[2]

As a challenge, Marc Andreessen of Netscape announced a set of new products that would help transform their browser into what he called an "Internet OS" that would provide the tools and programming interfaces for a new generation of Internet-based applications. [3].[4] Andreesson explained that the newest versions of Navigator were not just web browsers, but suites of Internet applications, including programs for mail, FTP, news, and more, and would come with viewers for a variety of document types, like Adobe Acrobat, Apple QuickTime, and Sun Java applets, which would give it programming interfaces and publishing tools for developers..[5][6]

2. INTERNET OPERATING SYSTEM, OR WEB OS

A new term used in the computer industry to refer to any type of operating system designed to run all of its applications and services through an Internet client, generally a web browser. The advantages of such an OS would be that it would run on a thin client, allowing cheaper, more easily manageable computer systems; it would require all applications to be designed on cross-platform, open standards; and would not tie a user's applications, documents, and preferences to a single computer, but rather place them on the cloud.[7]The Internet OS has also been promoted as the perfect type of platform for software as a service.The term Internet operating system has been used distinctly from web operating system, which instead refers to distributed operating systems hosted through Internet services themselves.

3. STUDY OF SOME WEB OS

In the world of today, the internet has imbued every area of our work with complete interconnectedness without any boundaries. From emails to online office suites, more users are becoming increasingly dependant on the internet for their day to day work. Thus, it was only natural that a web-based operating system was imminent in Web 2.0's age, and thus were formed these ten admirable services that give users the power of computing on the go. No more hard-drive backups and formatting just turn on your browser and get going with these Web OS services. [8]

Figure 1:Screenshot of the EyeOS Cloud OS

CLOUDO

Formerly known as Xindesk, Cloudo is an open internet-based operating system that is written in PHP and runs the LAMP software bundle. It makes full use of the area of the browser and seamlessly integrates with the iPhone's mobile browser. [9]Written using open technologies, this

browser based OS is high on features and usability. Currently in Public Beta, it opens to consumers next year.

EYE OS

One of the first implementations of the web-based OS that you can run on your own server, EyeOS offers a credible amount of customisation options as long as your web server runs PHP5 and Apache. EyeOS also offers GUI customisation options which means that you can set up an OS the way you and your users want it – highly recommended for those who need to set up their own Web OS.

GLIDE OS

Trans Media's Glide OS is yet another entrant into the competitive world of cloud computing. However, with Intel's plans of putting Glide into their ultra-mobile PCs, this is one online OS that is not to be trifled with. Packing a host of applications in its basic version, Glide does an admirable job of providing easy cloud computing for its users on both the PC and mobile platforms.

WINDOWS4ALL

Figure 2: Windows4All - The Silverlight based Web OS

Using Microsoft's Silverlight technology, Windows4all is an online virtual operating system. With a Vista-like GUI and desk bar, this is for all those Windows fanatics who need to use their favourite OS on computers that do not have Windows installed.

GOOGLE CHROME OS

Google's highly anticipated (slated for release in 2010) cloud computing OS is still largely open to speculation as Google has not released much information since its blog post on the Chrome OS and we have reason to believe that it will be as groundbreaking as its Browser.

4. FRAMEWORK OF WEB BASED OPERATING SYSTEM

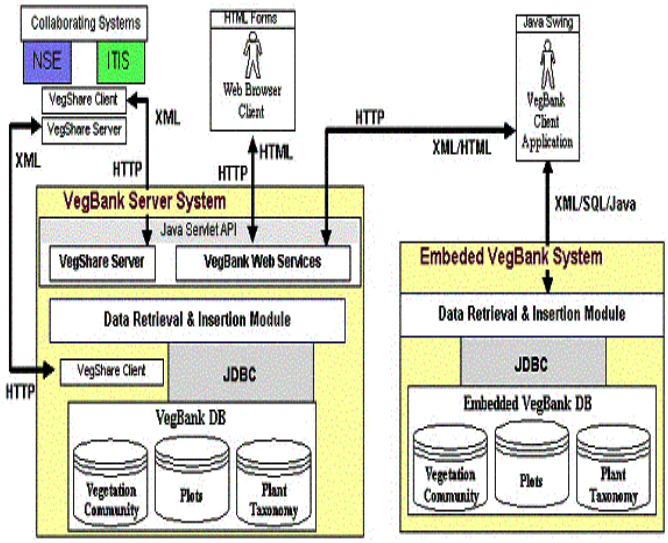

Figure 3 : Framework of web based operating system

5. THE PROS AND CONS OF WEB-BASED OPERATING SYSTEMS

Web-based operating systems, such as Google's Chrome OS, and new Chrome books notebooks built around the Chrome OS -- have both received a lot of attention in the press. The Chrome OS is essentially a bootable version of the Chrome Web browser, and it replaces a traditional operating system like Windows.

Unlike most operating systems, Chrome OS stores all of a user's applications and data on the Web, as opposed to a local hard drive. Although much more limiting then a traditional operating system, a browser-based OS offers huge advantages that can make it a compelling option for small businesses. Let's take a closer look at the pros and cons.

THE ADVANTAGES OF A WEB-BASED OS

Chrome books start up quickly in about 10 -15 seconds, which is significantly faster than any Windows PC. Plus, their impressive battery life lets you work an entire day on a single charge. More importantly, Chrome books practically eliminate time-consuming IT tasks such as building system images, troubleshooting small business software or spending hours cleaning virus-infected systems.[10]

Moreover, with all of a user's data and applications relegated to the cloud, employee responsibilities such as maintaining the latest virus definitions, updating software or even performing daily backups are now automatically managed by Google. And, since a computer with a browser-based OS stores everything on the Web, data loss due to damage or to a lost or stolen computer is all but eliminated.

In fact, moving to new hardware involves nothing more than turning on the new machine and logging in. [11]No need to transfer data, reinstall applications or even wait for IT assistance.

What we find most attractive about this concept, though, is how cost effective it could be. Google -- making a hard push to get people to buy into the benefits of a browser-based OS -- claims that companies can reduce their total cost of ownership by up to 70 percent over traditional PCs.

To that end, Google is offering small businesses and non-profit organizations the capability to lease Chrome books in bulk for $28 a month per user. Educational institutions receive an even better deal at only $20 a month. [12]

That price includes tech support, rapid hardware replacement, automatic background updates, a Web-based management console for IT professionals (for managing users, apps, and policies), and a hardware refresh every three years. For many businesses, potential savings of that magnitude are hard to ignore and definitely bear further investigation.

In spite of how good a deal this might be, not everyone will or should transition to this platform (graphics designers, accountants and architects come to mind). But if your employees only need to browse the Web, access email, and use typical office applications like a word processor, spreadsheet or presentation software, then a browser-based OS like Chrome OS might work for your business.

Google estimates that most companies will be able to transition approximately 75 percent of their employees over to its platform. Additional applications are available via the Chrome App Store. And before you ask, yes Angry Birds is available.

THE DOWNSIDE OF WEB-BASED OS

While a browser-based OS offers plenty of benefits, it's also hampered by severe limitations. Most notably: everything is stored in the cloud. If you're working from the office or your home, that's generally not a concern. However if you travel, accessing a reliable and fast broadband connection can be tricky. Many areas have dead zones, limited coverage and inconsistent throughput rates.

Complicating matters further, many wireless ISPs impose a data cap on their mobile broadband service. A computer that requires constant online access to transmit data or stream music and video could hit those caps very quickly. It wouldn't be as troubling if you could work offline, but the majority of apps currently available for Chrome OS won't work without a broadband connection. This makes working while traveling difficult or, in some cases, impossible.[13]

Other issues include the lack of proper VPN support, limited file management and some weird browser compatibility issues that prevent some websites from loading or functioning correctly. And, while the Chrome App Store offers a wide variety of apps, it's still rather limited. As a result, finding what you need can sometimes prove difficult.

Regardless of these shortcomings, the Chrome OS offers plenty of value. The best way to decide whether a browser-based OS is appropriate for all or part of your organization -- is to try one. Unfortunately, you can't download Google's Chrome OS directly. However these alternatives will introduce you to the browser-based OS concept first hand.

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