

# Managing and Securing Multi-Browser PC Environments in the Enterprise

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## Executive Summary

Today's web technology promises standards-based websites and web applications that can work in any modern browser. For many organizations, the wave of technological change to meet this promise comes with a new set of challenges. While organizations want to improve productivity and please users with new business applications which use modern browsers, existing, expensive and business-critical applications still require a specific browser to function.

This conundrum has caused many enterprises to compromise on both browser compatibility and security by standardizing on a single browser, Microsoft Internet Explorer, for their Windows systems. By forcing everyone to use only Internet Explorer because of web application compatibility, IT is taking unnecessary risks on network security and forgoing innovations that can improve business productivity. Overcoming these issues is what drives IT to deploy and tightly manage multi-browser PC environments in forward-looking organizations.



This paper will examine these issues in detail, providing a compelling case for not only proactively deploying multiple browsers in the enterprise, but also managing and securing this environment with Browsium Catalyst.

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## The Beginning of the Browser

For many years, the enterprise browser standard has been Internet Explorer. This homogeneity began around the time Internet Explorer usage peaked in 2004, with roughly 95% share on consumer and business PCs.

As enterprises built and deployed their first web applications, they based them on, or more accurately "tied them to", the popular browser of the day – Internet Explorer. Internet Explorer was highly manageable via Group Policy and contained a very powerful application development platform, called ActiveX, which allowed native Windows code to run inside the browser. The net effect was that enterprise IT had the browser it needed to run the business, so there was no reason to look at any other options.

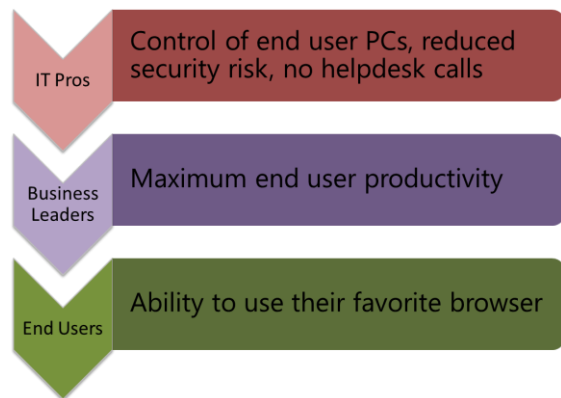
## Today's Browser Marketplace

Since 2004, Internet Explorer's overall usage share has dropped by nearly 50 basis points, while Chrome and Firefox have risen to become mainstream browsers on consumer PCs. By some measures, combined usage of Chrome and Firefox even dwarves Internet Explorer. In the enterprise, Internet Explorer is still the de-facto standard, but alternative browsers are increasing in usage, with a clear trend under way – the enterprise (like the consumer market) is becoming a multi-browser environment. In fact, a Microsoft and Forrester Research Study in November of 2012 shows 45% of enterprises already acknowledge the use of a second browser.

Helping fuel this multi-browser shift away from Internet Explorer in the enterprise are changes in browser support by Microsoft and Google. Microsoft will end support of IE6 in April of 2014, leaving legacy business applications optimized for this browser unsupported. As of November of 2012, Google discontinued support of IE8 for its Google Apps service after already dropping IE6 and IE7 for nearly all Google services. Google's moves are a clear sign of weakening support from major web services providers for all but the newest versions of Internet Explorer. This makes relying solely on four-year-old IE8 a risky proposition for enterprise.

## The Enterprise Browser Problem

Modern web technology promises standards-based websites will work in any modern browser. However, the reality is that HTML5 and CSS 3 standards are years away from being finalized and are subject to change – in



the meantime, browser vendors are implementing their own interpretations of the 'standards'. As a result many sites are optimized for particular browsers, or versions of those browsers, and many sites cannot run at all in certain browsers. This is particularly true of enterprise web applications that typically run only in Internet Explorer and often, only in older versions (such as IE6, IE7, or IE8).

In an enterprise, internal stakeholders want different things from their browser. IT administrators want complete control of end user PCs, which helps reduce security risks and avoids costly help desk calls. Business leaders simply want end users to be productive in their daily tasks, not suffering work stoppages as the result of browser conflicts or downtime from security issues. End users want the ability to use their favorite browser to access the latest business productivity tools, as well as popular sites on the web. If they can use a cool, new browser at home, why not use it at work too? Trying to meet these needs results in trade-offs that leaves one, if not all, of these stakeholders dissatisfied.

These competing requirements have forced many enterprises to compromise on both browser compatibility and security by standardizing on a single browser. In almost every case, they've standardized on an old version of Internet Explorer (IE8 or below) for their Windows systems, thus blocking their users from realizing the benefits of modern browsers like Chrome or Firefox. In blocking those modern browsers, IT is attempting to avoid lost user productivity and increased helpdesk costs which occur when users with multiple browsers on their PCs accidentally open a business-critical web application in a modern browser that is not capable of properly running that application. By forcing everyone to only use Internet Explorer for web application compatibility, IT is taking some risks:

- Gambling on network security by exposing an older, less secure version of Internet Explorer to the Internet.
- Browser incompatibilities with modern enterprise web applications and consumer sites on the Internet. This is caused by the use of older versions of Internet Explorer required for existing web applications.

In essence, IT is stuck between a proverbial rock and hard place, requiring an old browser for existing applications and a modern browser for new applications – an extremely difficult situation to manage.

## Ongoing Security Concerns

As Internet usage continues to climb, browser security issues follow suit. Vendors continually issue notices concerning zero-day browser exploits which must be addressed. Stopping browser usage until the vendor solves the problem is not a viable option when it impacts an enterprise's line-of-business applications. This loss of productivity is untenable for any organization, but continuing to run exposed software is exceptionally risky.

The most recent evidence of the seriousness of these exploits is the Java zero-day vulnerability announced in early January of 2013. This exploit caused the U.S. government to take the unprecedented step of recommending consumers and businesses disable or uninstall Java because of security concerns.

In the end some enterprises decide, based on risk tolerance, to keep the vulnerable browser or plug-in running and vigilantly watch for security issues. In a multi-browser environment, proper browser management could limit the use of a vulnerable browser or plug-in and keep the business running with an alternative browser. Additionally, more sophisticated browser management could block access to specific sites that could compromise network security or sensitive company information.

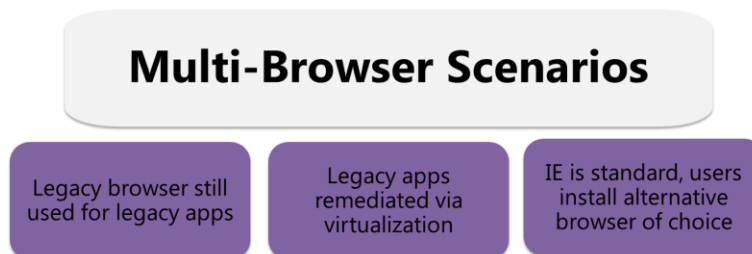
## What Drives IT Toward Multi-Browser Environments?

Enterprise IT and end users want it all -- in an ideal world one browser would be able to support legacy and current web applications, work seamlessly with new applications, be easy to manage, and provide the required level of security. Today there is no single browser solution. Looking to the future and the promised browser 'standards' it seems unlikely a single browser will ever meet every need.

You can standardize on an old browser to keep compatibility with existing web applications, but you risk security issues and must forgo innovative new applications that can improve your business. Or you can run a modern browser and have improved security, access the latest tools and web applications, meet end user expectations of browser performance and features, but your current web applications are unlikely to work.

Enterprises need forward and backward compatibility AND robust browser security. They need to run existing web applications side-by-side with new applications on a single PC. So, in the end, what they need is multiple browsers in the enterprise.

Let's take a look at some of the scenarios which create a multi-browser enterprise.



Each of these three scenarios comes with unique challenges. The details of each scenario below will help you identify what may be driving the need to proactively deploy and manage your enterprise multi-browser environment.

### **Scenario 1: Legacy browser still used for legacy applications.**

In this scenario, legacy or even current applications dependent on older browsers are still in use and IT has not yet implemented a remediation plan. Typically the old browser is IE6 or IE7, but IE8 is becoming the new, de-facto standard for enterprises migrating to Windows 7, and it's already over five years old and outdated. These legacy applications might be upgraded, they might be retired or replaced, or they might be remediated to run on modern versions of Internet Explorer using [Browsium Ion](#). But the fact remains, old versions of Internet Explorer are still being used on the organization's PCs and that's a problem. Not only are those old versions lacking modern browser security features, but they're also largely incompatible with modern business applications and the web. Try running SharePoint in IE6 or visiting YouTube with IE7. They're filled with rendering issues and essentially non-functional. Soon IE8 will suffer the same degraded experience in modern web applications like Google Apps, Oracle Siebel CRM Open UI, and similar enterprise web services.

So what does IT do? IT responds to pressure from business units and installs an unmanaged, alternative browser (usually Chrome or Firefox) to handle everything but legacy IE-dependent applications. Then end users are expected to make the right browser choice, depending on the application or website they're using. That's a problem. At best, the wrong choice means a work stoppage or a helpdesk call. At worst, the wrong choice means a security catastrophe and organization-wide downtime.

### **Scenario 2: Legacy applications remediated via virtualization.**

In this scenario, IT has implemented a remediation strategy for those legacy IE6 and IE7-dependent web applications via virtualization. Whether IT has chosen to use Terminal Servers, VDI, client-side OS virtualization, or even the Microsoft-frowned-upon application virtualization, the end result is the same. End users are faced with a desktop containing multiple IE icons or links to virtualized systems, presenting a confusing choice of multiple browsers, with all the associated security and compatibility concerns discussed in Scenario 1.

### **Scenario 3: End users install their alternative browser of choice.**

In this scenario, IT may have declared Internet Explorer as the organization standard, and may have even locked down the desktops in an attempt to prevent new browsers from being installed. But, unlike Internet Explorer, Chrome and Firefox can be installed directly into the user's profile, bypassing the administrative rights typically required to install software on client PCs. Once again, multiple unmanaged browsers mean it's up to users to make the right browser choice for each application, and that's risky.

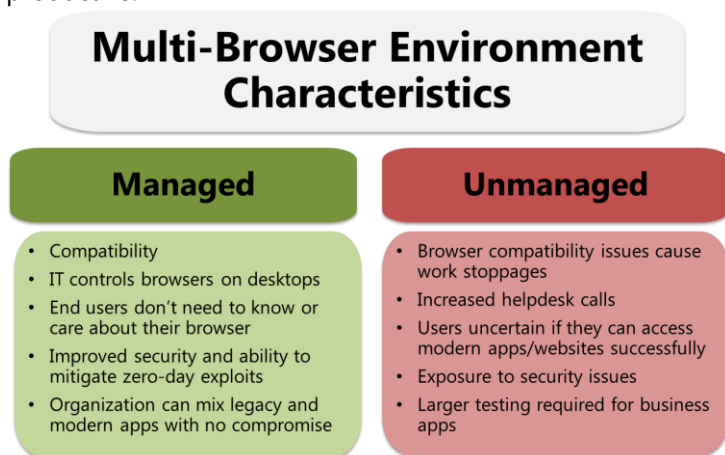
## **Multi-Browser Environments Are Today's Reality**

Despite the increasing consumer popularity of browsers like Firefox and Chrome in recent years, it's a rare CIO today who claims any browser other than Internet Explorer is the organization's default and preferred browser. According to the previously cited research paper by Forrester Consulting, 51% of companies enforce a standard browser by removing administrative rights or locking down users' PCs. At minimum, this leaves 45% of companies facing the reality of managing a multi-browser environment with 4% not currently addressing this issue.

Is locking down desktops truly a viable long-term solution? Keep in mind, users already have the ability to work around administrative rights and install a second browser. Can we really keep the modern browser genie in the bottle?

Once you come to grips with the fact that the multi-browser enterprise is inevitable, the focus should be on strategies to tame it. Leaving end users responsible for using the most compatible or secure browser is asking for trouble. No amount of training will ensure they make the right choice. After all, they've been trained their whole lives that browsers "just work" with the web, and each users' choice is simply a matter of personal taste.

A managed multi-browser environment holds the promise of always enabling PC users access to a browser compatible with their application or website, while still delivering a secure IT environment in the enterprise. This is a very powerful concept that every IT organization must consider to remain productive.



## Empowered Workforce Able to "Bring Your Own Browser"

Usage patterns have shifted significantly since Internet Explorer usage peaked in 2004. Smart phones and tablet devices are becoming increasingly powerful and are prevalent for business and personal use, as are video collaboration and social media. Business workplaces are increasingly virtual and employees are often geographically distributed. Mobile access to business and personal data puts information at users' fingertips 24/7, bringing with it quicker responsiveness. All of this helps blur the lines between home and business usage.

Personal devices, even PCs, inevitably find their way into the workplace. Users are not always conscious of how they are accessing their data because they've become conditioned to just pull it up quickly – with little regard to the device or browser they are using. There is an increasing trend toward BYOB (Bring Your Own Browser). When IT looks the other way or is helpless to defend against it, Chrome and Firefox start showing up on enterprise PCs in increasing numbers. IT must then bear the brunt of the confusion and incompatibility this will cause.

## Browsium Catalyst – Multi-Browser Management for the Enterprise

Browsium Catalyst delivers a solution for multi-browser management in the enterprise. It is a utility which enables IT to specify the most compatible and secure browser for each website on every PC in the organization, regardless of default settings and user behavior.

Catalyst reduces helpdesk calls, improves IT security, and enables user choice (a.k.a. consumerization of IT) by putting enterprise IT in control of multi-browser PC environments. It does this by ensuring the most compatible browser is used for each web application, strengthening security by limiting the use of aging and vulnerable browsers and plug-ins. Catalyst uses the IT management infrastructure already in place in today's enterprise for fast and easy deployment.

### Where Catalyst is Needed

The need for browser management in a multi-browser environment is clear. Enterprises no longer have to compromise on compatibility and security. Whether your organization requires an older version of Internet Explorer for legacy or current applications, or end users install an alternative browser of choice, Browsium Catalyst can help today. And soon Catalyst will support management of multiple browsers across virtualized environments.

Catalyst offers comprehensive browser management to IT, which provides end users with browser flexibility and a more secure computing environment. In addition, IT maintains critically needed control over settings and system configurations. With Catalyst, IT organizations achieve greater success by maximizing browser compatibility and strengthening security with this easy to manage utility. Here are some details about how Catalyst can help.

Maximize Compatibility	Strengthen Security	Manage With Ease
<p>Ensures users always use the required browser for each web application. Legacy business applications are accessed via the most compatible legacy browser, while modern applications and the Internet are always accessed with a modern browser.</p> <ul style="list-style-type: none"> <li>• Browser Rules ensure IT controls which browser opens each website</li> <li>• Transparent to end users – the right browser opens automatically – eliminating helpdesk calls and lost productivity from accidental compatibility issues</li> <li>• Browsium Catalyst works with IE6 and above, Chrome, and Firefox on Windows XP, Windows 7, and Windows 8</li> </ul>	<p>Strengthens security by allowing IT to limit legacy browser use to legacy business apps only. Keeps old versions of Internet Explorer off the Internet, even via unintentional end user action. Enables immediate revocation of browsers with zero-day exploits.</p> <ul style="list-style-type: none"> <li>• Legacy browsers only open legacy web applications; a modern, secure browser always opens sites on the Internet – regardless of user behavior</li> <li>• Browser actions controlled by policies set by IT – end users cannot easily override settings to use an insecure browser on the Internet</li> <li>• Contain zero-day browser exploits by revoking the browser for all users, or limit access to your intranet or specific sites</li> </ul>	<p>The Catalyst Configuration Manager makes creating Browser Rules simple. Integrates with popular enterprise software deployment services, from Active Directory to virtually any software distribution system, making deployment of the settings fast and easy.</p> <ul style="list-style-type: none"> <li>• Catalyst Configuration Manager makes it easy for IT to build Browser Rules</li> <li>• Expressions enable IT to build simple Rules based on URL or complex Rules based on specific criteria</li> <li>• Project files can be saved and edited or updated as needs change</li> <li>• Browser Rules can be deployed to client PCs via Active Directory (Group Policy) or any enterprise software distribution system</li> </ul>

## The Path to Multi-Browser Management

Start maximizing browser compatibility and security, while keeping up productivity in your enterprise. Browsium Catalyst is ready to make multi-browser management a reality for your organization today.

**Learn more and download the free [Browsium Catalyst Evaluation Kit](http://www.browsium.com) at [www.browsium.com](http://www.browsium.com)**

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