

Browsers: The New Nerve Center of Your Enterprise

Discover the top 2 browser-driven costs to IT and how to overcome them

Executive Overview

Over the past decade, enterprise organizations like yours have experienced a paradigm shift in end user computing. Your traditional world of native (Win32), executable client applications has given way to a portfolio of browser-based line-of-business applications and cloud-based solutions. While this rapid evolution has delivered great benefits, it has come at a cost and has left your IT organization without the tools to effectively manage this new landscape. In addition, it has significantly impaired your ability to understand, manage, and secure complex activities within the browser environment, opening your enterprise to increased security risk and wasted money. This paper explores why a modern enterprise like yours needs management tools designed for browser-based applications, the cost of an unmanaged browser to your organization, new browser challenges on the horizon, and how Browsium’s browser management suite solves these challenges.

Why Your Modern, Browser-Based Enterprise Needs New Management Tools

Browser vendors treat web browsers as ‘consumer’ tools first, ‘enterprise’ tools second. This is in part due to the huge number of consumers accessing the web, and in part due to an exceedingly vocal web developer community. Because of this, these vendors are rapidly innovating to deliver newer, richer, faster, and more diverse browser solutions for that consumer audience. That pace of change is in direct opposition to your traditional enterprise IT model, where change control processes include rigid and thorough planning and risk calculation. Because your business operations cannot suffer even the slightest downtime, shortcutting these processes to keep step with technology creates unacceptable risk.

Traditional Enterprise	Modern, Browser-based Enterprise
<ul style="list-style-type: none"> • Installed, packaged software • Clear application boundaries • Rigid change process • Structured APIs • Easily compartmentalized 	<ul style="list-style-type: none"> • Runtime compiled applications • Fluid web applications • Agile, nimble process & updates • Limitless APIs & scripting • Everything in one process

Comparison of enterprise application delivery models

Traditional or native client applications were part of a mature ecosystem that had a well-defined set of desktop and network management tools, as well as a clear definition of how those applications integrate and operate with the underlying operating system. The APIs and process models were well-documented and well-understood, the limits were hard, and walls could easily be erected to isolate applications and their components to manage migrations or compatibility issues. Contrast this with the openness and versatility of browser-based applications, in the comparison table above, and it’s easy to see why a new set of browser management challenges arise for enterprise IT that require a new management toolset.



The missing component of IT management

The Unexpected Cost of an Unmanaged Enterprise Browser

Traditional enterprise management tools lack visibility into the browser and its associated components. Without browser management tools designed to navigate the complexities, interdependencies, and distributed nature of the modern (browser-based) enterprise, a critical blind spot is created. This blind spot blocks IT from performing their core function and exposes the organization to increased security risk and wasted money, as outlined in the following table.

The Unexpected Cost of an Unmanaged Browser	
Increased Security Risk	Wasted Money
<p>Legacy Java versions and ActiveX controls – Required for compatibility, but can be targeted for cyberattack if left unmanaged.</p> <p>Zero-day browser exploits – Can't be eliminated, but can be avoided with a managed multi-browser environment to enable an organization-wide switch to a safe browser.</p> <p>Unnecessary attack surface – Forgotten, and possibly unused, old software leaves a vulnerable attack surface due to a lack of security updates. Isolate or identify and remove with browser management.</p> <p>Regulatory compliance and audit verification – You can't comply if you can't see what's running in the browser. Real-time inventory and analytics are needed to verify compliance.</p> <p>Shadow IT - Critical data leaves the organization every day via SaaS apps unknown to enterprise IT. Track with browser management to contain risk and ensure compliance.</p>	<p>Web application and add-on inventory – Inventory collection and usage stats are prohibitively expensive if done manually. Automate with browser management to save time and money.</p> <p>Software procurement and support – Money wasted if based on inaccurate software inventory or usage data. Browser management is the only way to gather accurate information.</p> <p>Lost productivity – Web application compatibility issues kill knowledge and task worker productivity. Discover and remediate issues before they cost the business.</p> <p>Patch, test, fix bugs – High-cost maintenance process wastes money and time on underused web applications. Identify and eliminate unneeded software for big savings.</p> <p>Unneeded hardware capacity or cloud services – A larger footprint due to unused web applications or inaccurate usage data requires more hardware and cloud services. Accurate application inventory and analytics improves resource planning and reduces costs.</p>

These costs are the direct result of a set of challenges unique to browser-based environments. The rapid pace of innovation in browser technology creates a dynamic ecosystem that requires browser management today and well into the future.

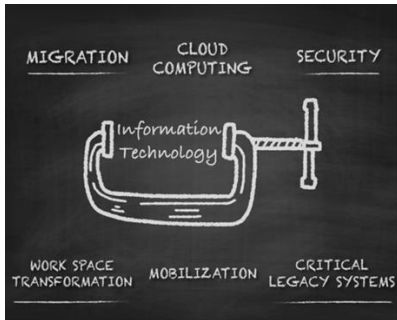
Browser Roadblocks for IT

IT organizations face many challenges deploying, managing, and operating modern, browser-based enterprise environments. Today those roadblocks are found in the areas of web application discovery and rationalization, browser and cloud migration and related compatibility challenges, and security and compliance in a browser-centric, SaaS-connected line-of-business application world.

Software vendors compound these challenges by working quickly to shed their legacy support burden. They are slashing support lifecycles and forcing enterprises to reprioritize projects around their timeframes and not the enterprises' business needs. Enterprise IT face a crossroads when trying to maintain critical legacy systems, while simultaneously embracing modern platforms to deliver next-generation offerings. At the same time, IT leaders are pushed to migrate datacenters and applications to the cloud as a way to enhance service delivery and reduce costs.



Other external forces compound this situation further with the influx of new computing platforms. The rise of personal mobile devices, primarily smartphones and tablets, has put IT on the defensive, with users able to connect from anywhere on devices that receive a constant stream of operating system and application



IT is being squeezed on many fronts

updates. The push for standards is another force driving platform change. As browser vendors work to embrace standards, they're forced to sacrifice legacy compatibility in exchange for modernization in the hope that this time they'll get it right and stabilize the platform.

Unfortunately, the platform modernization reality is far different than the vision. History shows that today's good idea is often tomorrow's technical conflict. Some technology is deprecated because it was found to be inferior, while other technology ideas fail to deliver the expected benefits and value. Whatever the case may be, once the technology is embedded in the web platform, systems are built on it and changing elements of the technology stack are disruptive to IT organizations.

When these platform changes must be adopted, considerable financial and resource investments must be made that result in simply running systems in place on a technology treadmill. Applications now work on the new platform, but no features were added and no new business value has been created.

Future Enterprise Browser Hurdles – Mobility and Browser Choice

As the consumerization of IT takes hold, additional obstacles unique to the enterprise web have begun to appear. Two of the biggest challenges include enabling mobile access to browser-based applications and becoming 'browser agnostic' without performing a major business application overhaul.

Organizations have expressed a desire to enable access to line-of-business applications for users on personal mobile devices, but they are unsure how to deliver these services. Many of these applications require features, components, or extensions that may not be available on those devices. The situation is further complicated by mobile device management tools which suffer from the same shortcomings as desktop management tools – they deliver higher-level management, not management at the browser usage level where all the action takes place. Browsium is working to address these limitations and extend browser-based business applications to a range of mobile devices and platforms.

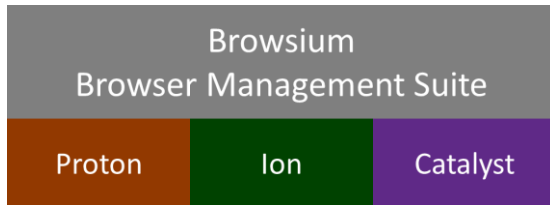
As the breadth of browser-based applications extend, many organizations are looking to provide user choice, or to become 'browser agnostic', by supporting all modern browsers and enabling access to all web applications through any of the browser choices. Many IT organizations have found that, while technical capabilities are converging, manageability of the various browsers is vastly different from one to another. They want vendors to address this 'management mismatch' by delivering a policy and security management solution that is based around scenarios and business requirements, not features. Organizations must be able to define and set policies in a way that maps to their business, instead of mapping out all browser policy values and manually configuring each setting.

But how can IT even begin to manage these issues when they can't even see what they have in today's browser-centered end user computing environment?

The Solution: Browser Management

Browsium was founded on the realization that, as business operations moved from packaged executables running natively on the OS to a set of disconnected, but hyper-dependent, applications compiled by the browser in real time, there was a clear need for browser management tools in the enterprise.

Addressing legacy web applications during browser migrations is only part of the story. By providing crystal-clear visibility into the browser blind spot that desktop and network management tools leave behind, along with the functionality to enable IT to take action against what they learn, Browsium delivers a solution tailored to manage the unique environment of browser-based, enterprise web applications.



Browsium’s software solution, with its three modules, Proton, Ion, and Catalyst, provides full lifecycle management, from discovery to action, for everything browser-based within and outside the enterprise. Our browser management suite enables legacy, modern, and cloud business applications to

work seamlessly together, decoupling dependencies, eliminating operational risk, reducing security exposure, and shortening deployment cycles.



Proton is a discovery and analytics tool that supplies enterprise IT with a comprehensive picture of end-user browser activities, requirements, and dependencies—allowing organizations to see through the blind spots other management tools don’t touch that give rise to security risks, blocked migrations, and under/over-utilized software licenses.

Ion is a web application remediation and Java management solution for enterprise. It solves the Internet Explorer browser migration challenges organizations face when they upgrade operating systems and browsers and deploy new web applications.

Catalyst is a multi-browser web traffic manager, pairing web applications with the most compatible and secure browsers including Internet Explorer, Chrome, and Firefox. With Catalyst, IT can quickly support business needs for HTML5 and SaaS-based applications by adding a second, modern browser to the existing desktop environment.

With this broad and robust base established, Browsium is able to expand further and deliver the next-generation management solutions enterprise IT will require, with the browser cemented at the core of every business-critical application used throughout the enterprise.

The Browsium Roadmap

To address the evolving challenges facing enterprise IT, Browsium will continue to enhance our browser management suite. These enhancements span all of the modules – Proton, Ion, and Catalyst. The following sections outline just some of the many innovations currently in development that will help each module to deliver on the requirements of enterprises managing a browser-centric IT environment.

Proton

Proton will add browser-related asset management and performance analytics to extend browser management and IT operation’s visibility in a way other tools available today cannot. In addition, Proton will provide insights into browser performance, memory usage, as well as file and object load performance. These data points will help IT understand their web-based workspace in a detailed way, providing the ability to

identify and determine root causes of browser hangs, crashes, or even slow performance. Proton's performance analytics will also give insights to help identify patterns across the organizations before they become support issues. As an integral part of the software suite for managing the modern enterprise, Proton will detect poorly performing web application components, such as slow rendering images or file downloads. It can also detect poorly performing scripts that can cause browser hangs which impact unrelated applications in other tabs.

Browsium is also pushing the Proton module forward to assist with cloud migrations and ease cloud estate management. As organizations embrace 'the cloud', many are finding that mandate is unclear. Is cloud migration about moving server workloads to the cloud and shutting down the datacenter? Is it about transferring those workloads to third party SaaS offerings? What about application rationalization? How do you control access and licensing when users can essentially self-provision?

The Proton roadmap tackles all of these areas. Cloud readiness starts with an understanding of your browser and web application landscape. Only then can you build and execute a plan to securely and cost-effectively migrate mission-critical application to the cloud. Proton is essential to build an understanding of how those systems and services are being used, on-premises vs. in the cloud, and it is a vital piece of the cloud estate management puzzle. In addition, Proton will provide insights and actionable recommendations to enable better user workspace management and security.

Ion

If you run Java in your enterprise, as nearly every enterprise organization does today, it's vital to proactively manage it. Browser management is a fundamental tool for managing Java-based web applications. To help enterprise IT with this widespread challenge, Browsium is extending the Java management capabilities of the Ion module to enable organizations to set their own application upgrade timetables, rather than follow the schedule vendors dictate. With Oracle announcing the end of life for the browser plug-in starting with Java 9, along with the introduction of new browsers like Microsoft Edge, and the recent version of Google Chrome dropping support for the existing plug-in, organizations are being told they must rewrite their browser-based Java applications or risk losing functionality of those systems. However, every enterprise IT professional knows the legacy investment in Java will be with us for a long time. Ion will eliminate that pain by delivering the ability to run Java in a secure and controlled environment, well into the future.

These challenges aren't limited to Java – this is just one example Browsium's work to ensure organizations will have the browser management solutions they need to continue the operation of mission-critical web applications. And they will work in spite of external factors that conspire to disrupt application usage and force tremendously expensive upgrade cycles that are unplanned and, frankly, unnecessary.

Catalyst

The Catalyst module is the engine that drives an organization's ability to be nimble and enact a controlled, policy-based, business rules-centric deployment of multiple browsers. Users can be free to use the browser of their choice, while IT avoids the support burden of user confusion or browser access incompatibilities. Browser choice and traffic control are just the beginning of what Catalyst can deliver to an organization. New features and enhancements are coming to Catalyst that will open new security and access policy controls, enabling IT to react to threats and manage user requirements more proactively than ever before. These security features address zero-day exploits and provide IT with mechanisms to ensure users are protected from threats, while continuing to support business operations and communications. Catalyst will change the way policy controls are set today – by managing individual features – and shifting to a business focused, role, and policy-based approach where settings are grouped and deployed based around scenarios.

Unified Browsium Client

In addition to the module-specific enhancements outlined above, Browsium is also working to make its software suite easier to deploy and manage. Today, each Browsium module includes a lightweight, headless client component with a controller process and browser extensions. Each client is easy to install at enterprise scale, but deploying, and keeping up-to-date, three separate software packages creates unnecessary overhead for enterprise IT. Browsium will soon deliver a single, integrated installer that delivers the client functionality for Proton, Ion, and Catalyst. This unified Browsium client will save IT time and make it far easier for you to take advantage of the end-to-end management capabilities of the complete Browsium suite.

Browser Management is Essential to Operate the Modern Enterprise

The modern enterprise is here now, and this dynamic, new workspace is delivered via the browser. Browsium was founded to solve the critical need for browser management solutions in the enterprise and is continuing to innovate to ensure organizations have the ability to meet new technology and end user workspace challenges. Today, Browsium's browser management suite helps address the ever-changing browser landscape. The roadmap for Browsium clearly defines what will be needed as browser management continues to be as essential to enterprise IT operations in the future as desktop and networks management tools were in the past.

For more information about Browsium, and to learn more about the costs of an unmanaged browser in the enterprise, please contact info@browsium.com or visit www.browsium.com.