

Solution Brief

# Bitdefender<sup>®</sup>

## Browser Isolation





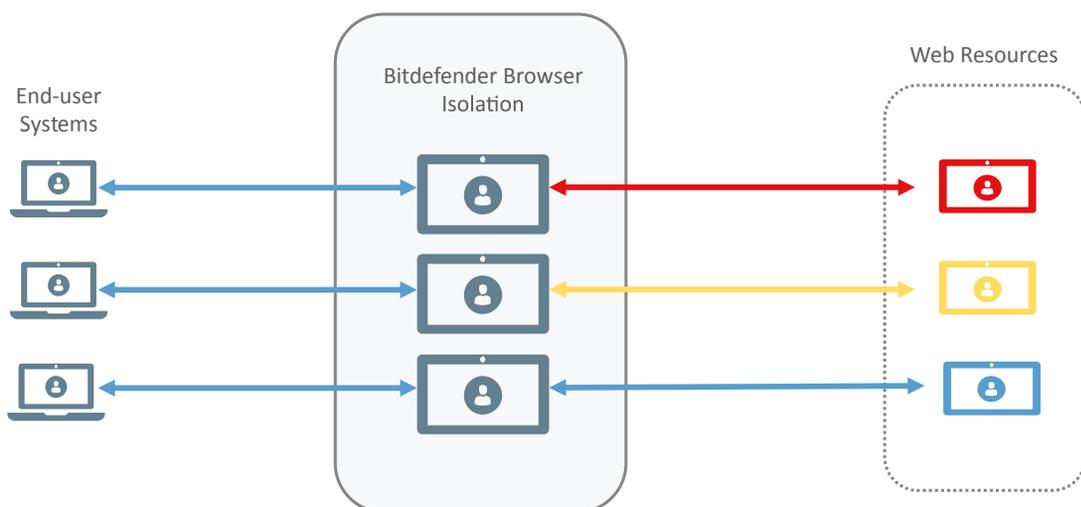
That the web is a dangerous place will not surprise any IT administrator. Web browsers, and their associated plug-ins, constitute a significant part of the threat profile of organizations. By their very nature, browsers are designed to consume and execute an extremely wide variety of code to locally render web content. The threats are myriad, including ransomware, cryptojacking, and more insidious attacks that lead to full-blown data breaches, such as file-less attacks which occur entirely within memory. At the same time, the productivity of end-users often depends on access to web resources.

Attackers continue to take advantage of browser vulnerabilities.

## Isolate the greatest risk to your network - web browsers – not users

Just as end-user systems are isolated from critical servers, web browsers must be isolated from end-user systems, and the execution environment of those browsers must be secured.

Bitdefender Browser Isolation combines the seamless end-user experience of Citrix Virtual Apps (formerly XenApp) to isolate browsers with unique and proven Bitdefender security. This creates a virtual air-gap between end-user systems and the web while ensuring attempted breaches can neither gain a foothold in, nor escape from, the execution environment of the virtualized browsers.



What matters is where web content executes, and how the isolated browser environment is secured, regardless of the type of threat or the source.

### Users will keep clicking, so you must contain and secure browsers

When a user clicks on a link, a malicious payload may be downloaded and executed by the browser. The URL itself need not be suspicious; sophisticated attackers continue to find ways to embed malicious content in otherwise legitimate websites – including malvertising, DNS hijacking, compromising publishing platforms such as WordPress, etc. - or craft URLs which appear legitimate. Attackers are creative, and even the most highly trained end-user can fall prey to sophisticated, targeted attacks.

In file-less attacks, while the payload is executed by the browser to gain a foothold on the system by exploiting a vulnerability, no malware is written to disk. These sophisticated attacks reside entirely in memory, providing not artifacts on disk for traditional anti-virus to detect.

## Unleash the full security potential of Citrix virtualized browsers

Citrix Virtual Apps delivers exceptional end-user experience which is the product of years of Citrix leadership in application virtualization. To secure virtualized browsers, Bitdefender leverages unique Citrix Hypervisor (formerly XenServer) features in ways which no other security vendor has.

### Isolated from the isolated browsers

Attackers often seek to subvert security which runs in the same server as virtualized applications. Bitdefender Browser Isolation is itself isolated from the execution environment of virtualized browsers since it leverages the hypervisor, which operates in hardware-enforced isolation from the browser execution environment.

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### Beyond detection

Looking for known bad, in the form of malware signatures or blacklisted URLs, is a limited approach. Malware defeats signatures at an ever-accelerating pace, and signatures are powerless against novel threats. Bitdefender Browser Isolation defeats attacks by monitoring memory for attack techniques including buffer overflows, code injection, and heap spray, which are used to gain an initial foothold on systems, including in file-less attacks.

### Avoid virtual lockdown

The inverse of blocking known-bad is allowing only known-good. This approach includes locking-down browsers and limiting access to only whitelisted URLs.

The lockdown approach unravels as end-users demand additions and exceptions to the point that whitelists become unmanageable, something which is familiar to users of ad-blockers or password managers. It can also provide false hope as what appear to be safe browsers, plug-ins, and web sites, can be leveraged for attacks faster than administrators are able to react. Bitdefender Browser Isolation blocks the techniques which attackers use to gain a foothold in your environment, effectively eliminating many of the tools on-which attackers rely.

### Defeat invisible threats

Bitdefender Browser Isolation leverages unique capabilities of the Citrix Hypervisor (formerly Xen-Server) to eliminate common in-memory exploit techniques from the toolkits of attackers. The approach, which is available from only Bitdefender, leverages an API in the Citrix Hypervisor to monitor the execution environment of virtualized browsers, reporting on and/or blocking malicious activity.

By looking for attack techniques, the solution requires no prior knowledge of the exploit being used or the vulnerability being attacked. It is true zero-day protection for the web.



## Make a Difference with Bitdefender Browser Isolation



Execute web content in isolated, virtualized browsers



Protect virtualized browsers with unique, proven Bitdefender security



Unleash the full potential of Citrix Virtual Apps and Hypervisor

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Bitdefender is the cybersecurity company you can trust and rely on.

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