

unlocking the **beauty** of the web

Internet Explorer 9 Release Candidate
New Features Summary

New features in the Internet Explorer 9 Release Candidate (RC)

All-Around Fast

Continued Focus on Browser Performance

Internet Explorer 9 RC continues to improve performance for real world customer scenarios. Performance is a multidimensional challenge that spans the 11 browser subsystems. Between the Internet Explorer 9 Beta and Internet Explorer 9 RC releases, over 2,000 changes have been made to **improve browser performance** for real customer scenarios. Internet Explorer 9 RC starts faster, loads webpages faster, and allows you to interact with web pages faster than ever before.

Improved JavaScript Engine Performance

Chakra, the new JavaScript engine for Internet Explorer 9 RC, has continued to be tuned for the common patterns found across real-world websites. Examples of this include significant performance optimizations to JavaScript Closures and object oriented programming patterns, more efficient code generation patterns, and improved JavaScript type system lookups - all patterns commonly found in web applications such as Facebook and Gmail. Chakra uses advanced techniques traditionally only found in desktop optimizing compilers. A byproduct of **improving the performance of Chakra for real-world scenarios** is that Internet Explorer 9 RC is now the fastest JavaScript engine on the WebKit SunSpider Benchmark.

Dynamic GPU Usage

The Internet Explorer 9 Beta release included instrumentation that monitored the performance characteristics of the different GPUs on which our beta customers were running Internet Explorer 9 Beta. By using this real customer telemetry, Internet Explorer 9 RC now **dynamically decides when to use GPU based rendering and when to use software based rendering** based on the customer's GPU and installed graphics driver. This ensures the fastest possible experience for all customers by default.

Increased JavaScript Callbacks-Per-Second

Many websites and JavaScript frameworks use programming patterns that yield to the browser in the middle of a computation and then receive a callback after a specified duration, like highly interactive web applications such as games. For some programming patterns, the more callbacks the JavaScript receives, the faster the website responds. Internet Explorer versions 6, 7, 8 and 9 Beta have supported 64 callbacks-per-second. Internet Explorer 9 RC has **increased this to support 250 callbacks-per-second**, which aligns with the HTML5 specification and for this programming patterns results in faster web applications.

Increased Network Cache Sizes & Improved Cache Heuristics

In previous versions of Internet Explorer, the default cache size for temporary Internet files was 50MB. After the cache became full, resources were removed from the cache and the next time that resource was needed, it would be downloaded from the network. Based on significant customer data, Internet Explorer 9 RC has **increased the size of the temporary Internet files to 250MB**, which means that Internet Explorer 9 RC can store more resources locally on the PC. In addition, based on significant customer telemetry, Internet Explorer 9 RC has improved the algorithms that decide which resources should be retained in the cache to maximize page load times.

Industry Leading Power Consumption Levels

One dimension of browser performance is how much power is consumed while by the browser is performing common tasks, such as browsing the web or watching a video. The more power consumed by the browser, the more quickly the battery on your mobile device is drained. By leveraging the GPU for graphical computation, Internet Explorer 9 RC **saves significant power and leads the industry in power consumption** by allowing the CPU to sleep for longer durations. Internet Explorer 9 RC is also the only browser on the Windows platform that integrates with the Windows Power Options and respects customers' power settings to conserve power and maximize battery life.

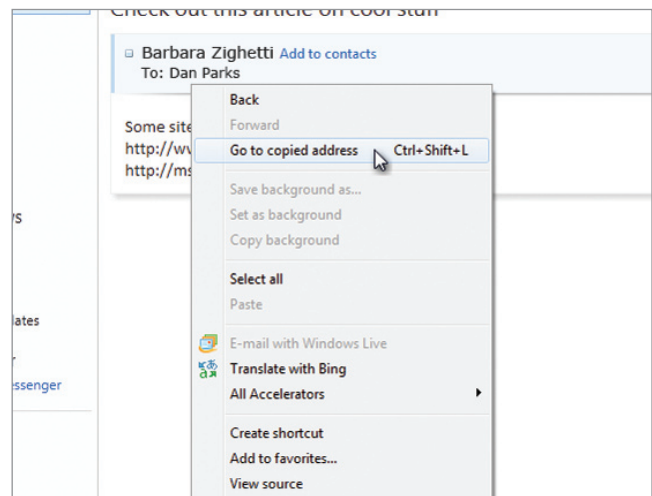
Clean, With a Focus On Your Websites

Improved Usability

The new features in the Internet Explorer 9 Release Candidate (RC) continue to refine and improve the usability of the browser. **Menu bar toggle** allows you to permanently enable the menu bar with just a few clicks.

Internet Explorer 9 RC also gives you even more space to let your sites shine by **reducing the frame pixels by five** over the beta release to see more of your favorite site's content.

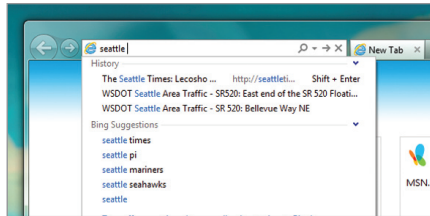
On the page context menu there is a new **paste and navigate** shortcut that gives you the ability to search or go straight to an address using copied text. It is also available as a shortcut key Ctrl+Shift+L.



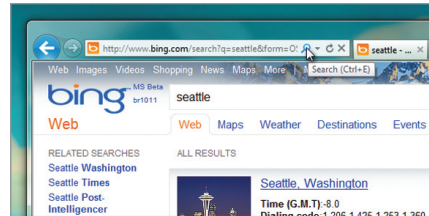
Paste and navigate

One Box

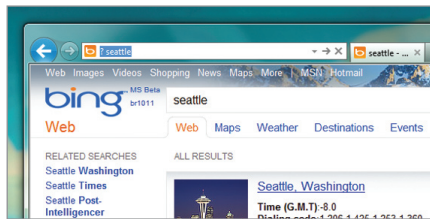
Internet Explorer 9 RC allows you to search a term in One Box and then **easily refine that search term** without having to retype your original query. Simply click the new search glyph in the address bar and begin editing your original query. This gives you more control and speed over your search capabilities, saving you time and keystrokes.



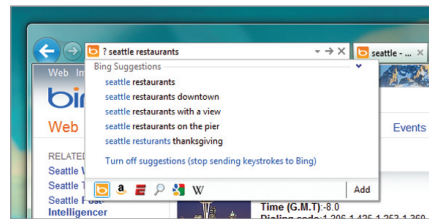
Search in One Box



Click the search glyph



The original search query reappears



Refine the original search query

With **improved detection of intranet**, we make it easier to get to intranet sites in the corporate environment. Users and IT admins can set one-word entries in the One Box to first perform an intranet lookup. By default the experience for one-word entries is to search the web.

Notifications

Internet Explorer 9 RC continues to build on the notification improvements that were introduced in the Internet Explorer 9 Beta. Less important notifications will now be **automatically dismissed** after a short period of time in order to emphasize higher priority notifications.

We are also improving the **SmartScreen Application Reputation notification** by allowing you to delete suspect downloads straight from the notification bar, saving you extra clicks.

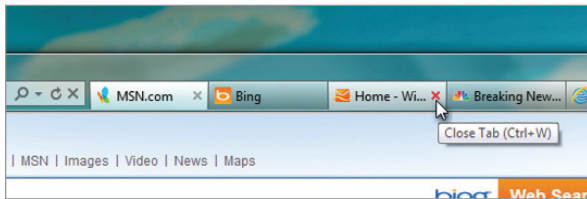
Tabs

With the RC Build, we continue to listen to customers and have implemented the ability to **place tabs on a separate row** from the address bar providing you more space for all your tabs.

We've also improved the visibility of the active tab and enabled you to **close background tabs** without



Tabs on a separate row from the address bar

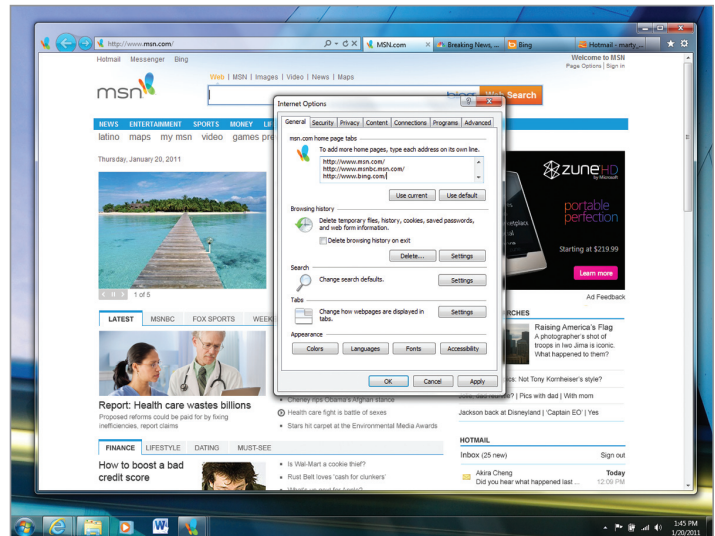


Ability to close a background tab without selecting it

Pinned Sites

You will now be able to pin **multiple home pages** in a single pinned site with Internet Explorer 9 RC and open several web pages simultaneously. This will both reduce the clutter on the task bar and make browsing to your favorite sites available with a single click.

Additionally, it's now possible to **pin sites to your taskbar wherever it's positioned** (vertically, for example) and for developers to implement **drag-to-pin support** right on their pages.



Multiple homepages in a single pinned site

File Download

With the RC Build we have **improved the discovery of file download notifications** where the notification in Internet Explorer will glow after a period of time using the alert state that is similar to how applications behave on the Windows 7 taskbar.

We have also **increased the visibility of download speed** in the download manager where you can now see the download speed along with all the other file information. If you have multiple files downloading you can compare the speed of the downloads and even pause a lower priority file to promote a higher one.



Sites pinned to the vertical taskbar

The Browser People Can Trust



Adding a tracking protection list

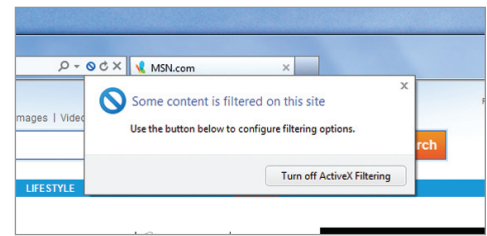
Tracking Protection

Some content on websites can be used to track your activity as you browse the web. **Tracking Protection** allows you to limit the browser's communication with certain websites—determined by a Tracking Protection List—to help keep your information private. Anyone can create Tracking Protection Lists, and there should be many to choose from in the near future.

ActiveX Filtering

ActiveX is a technology that allows web developers to create interactive content on their sites, but it can also pose a security risk.

Internet Explorer 9 RC allows you to block ActiveX controls for all sites, and then turn them back on for only the sites that you trust with the new ActiveX Filtering option.



ActiveX Filtering

Pinned Sites InPrivate

InPrivate browsing is now supported on pinned sites giving you more choice and increased privacy across all your browsing experiences. When you pin a site with InPrivate browsing enabled, the next time you launch the pinned site, the browsing session is automatically enabled as InPrivate.

Interoperable With The Same Markup

CSS2D Transforms

Internet Explorer 9 RC adds support for the **CSS3 2D Transforms** module, which enables elements that are rendered by CSS to be transformed in two dimensional space.

HTML5 Semantic Tag

Internet Explorer 9 RC improves support for several **HTML5 semantic tags** where a semantic element is defined as one whose tag name describes its content, but which does not have any special behaviors. Elements now inherit from `HTMLElement` and by default the elements are now styled as specified in the HTML5 specification.

Geolocation

With support for **geolocation**, Internet Explorer 9 RC enables a web application to access the current geographical location of the PC running Internet Explorer, as specified in the Geolocation API specification. The webpage can then tailor the user experience according to location

WebM Support

Internet Explorer 9 RC supports playback of H.264-encoded video using the HTML5 video tag and now **WebM video** as well when a VP8 coded is installed on Windows.

Summary of the updates made to Internet Explorer 9 since the Internet Explorer 9 Beta release on September 15, 2010

All- around fast	Clean, with a focus on your websites	The browser people can trust	Interoperable with the same markup
Continued Focus on Browser Performance	Improved Usability <ul style="list-style-type: none"> — Menu bar toggle — Reduced frame pixels — Paste and Navigate 	Tracking Protection Lists	Support for CSS3 2D Transforms
Improved JavaScript Engine Performance	One Box <ul style="list-style-type: none"> — Refine search queries easily — Intranet search setting 	ActiveX Filtering	Support for HTML5 Semantic Tags
Dynamic GPU Usage	Notifications <ul style="list-style-type: none"> — Auto dismiss of low priority notifications — Improved Application Reputation notifications 	Pinned Sites InPrivate	Support for Geolocation
Increased JavaScript Callbacks-Per-Second	Tabs <ul style="list-style-type: none"> — Optional full tab row — Close button for background tab 		WebM support
Increased Network Cache Sizes & Improved Cache Heuristics	Pinned Sites <ul style="list-style-type: none"> — Multiple home pages in pinned sites — Pin to task bar wherever its positioned — Drag to pin functionality 		
Industry Leading Power Consumption Levels	File Download <ul style="list-style-type: none"> — Improved discovery of file download notifications — Download speed visibility for the download manager 		

Languages Supported

With Internet Explorer 9 RC we increased the number of supported languages from 33 at Beta to 40 at RC. They are: Arabic, Catalan, Chinese (Hong Kong), Chinese (Simplified), Chinese (Traditional), Czech, Danish, Dutch, English (US), Finnish, French, German, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Italian Japanese, Korean, Norwegian (Bokmål), Polish, Portuguese (Brazilian), Portuguese (Portugal), Romanian, Russian, Slovenian, Spanish (Spain), Swedish, Thai, Turkish, Ukrainian, Vietnamese, Bulgarian, Croatian, Estonian, Latvian, Lithuanian, Serbian (Latin), and Slovak.