

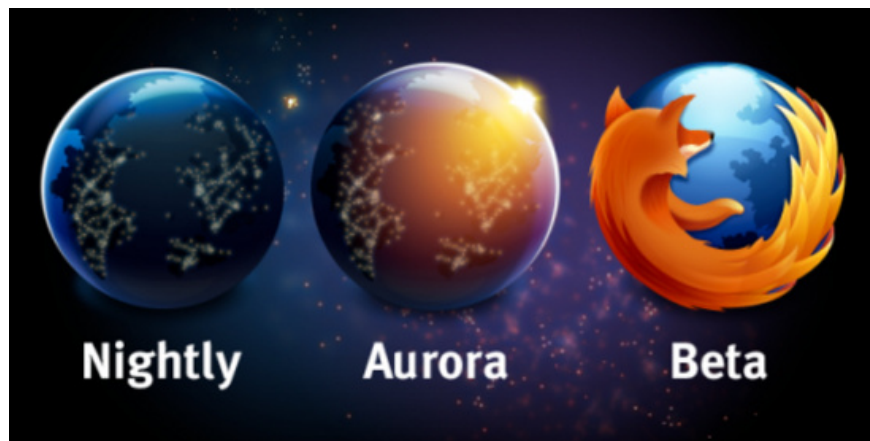
Why should I have Firefox 64-bit for Windows?

Recently, Mozilla - the famous Firefox browser developer - has made a decision to cause a lot of 'grievances' in this browser user community.

Recently, Mozilla - the famous Firefox browser developer - has made a decision to cause a lot of "discontent" in this browser user community.

They said they would stop developing Firefox's Nightly Build for 64-bit Windows users. As for Linux and Mac OS X, because of the contract, the 64-bit version is still available.

What is Firefox's Nightly Build for 64-bit Windows users? If you are using Firefox on Windows, then the mainstream, stable version, which we usually download from Mozilla's home page is a 32-bit version of Firefox, although Windows you are installing on your computer is a good 32-bit Windows. 64-bit. During the development of a new version of Firefox, Mozilla divided into many different Build packages, and Build Nightly was one of those Builds, and it was developed by Mozilla in two versions: 32-bit and 64-bit.



Many of the reasons for this decision were made by Mozilla: many plugins that do not support 64-bit versions, Mozilla's bug reporting and monitoring system do not distinguish between 32 and 64 bit, 64-bit version errors. not fixed because that version is not preferred, and JavaScript executes slower on 32-bit versions. Moreover, Mozilla developers have said that they will not fix errors that are only available on 64-bit versions. They also announced that the full version of Firefox 64-bit will not be released in the first half of 2013 and it probably won't be released!

However, this is an unfortunate decision of Mozilla. Because in many ways, 64-bit browsers clearly *"break down"* 32-bit versions. What are those aspects?

Security

First we have to talk about security related factors. Security holes in web browsers today are a painful problem. Therefore, both the computer operating system vendor and the browser developer must apply advanced technologies to reduce the risk of the user's browser or PC being attacked by hackers. One of the popular technologies now is for the browser to run in a sandbox environment to reduce the risk of malicious software writing information to the user hard drive: when an application is launched, the Sandbox will create a "fence" around to isolate the application from the rest of the system.

Or another method called ASLR - Address Space Layout Randomization. This is the technology that moves dynamic DLL and application-linked libraries to random memory areas, making it harder for hackers to attack from outside. On Windows 8 there is also a security feature, High Entropy ASLR, which is essentially a random distribution.



Mozilla should continue to develop a 64-bit "fire fox".

From here, the problem with 32-bit Windows, or Firefox 32-bit, has gradually surfaced. Each 32-bit process can access 2 caps of 32 bytes of memory (equivalent to 4GB) while the 64-bit process can access up to 64 64 bytes of memory (see also: differences between 32-bit Windows and Windows 64-bit). Of the 4GB of memory that 32-bit processors can receive, the system takes about 2GB or 1GB, so applications only 2GB to 3GB to use. Therefore, when applying ASLR technology, there are not many random areas to make the above moves. Dynamic link libraries still need to be packed side by side to ensure there is enough memory for the data storage application.

On 64-bit Windows, this issue has been resolved. With 18 'billion' GB of memory, there are countless address spaces to disperse dynamic link libraries to places that are not easily found.

For other applications, ASLR security technology or 64-bit computing probably doesn't have too much significance. However, the browser is another story. Browsers are very easy to be vulnerable to malware attacks because they are frequently used to connect to network resources that are very useful but also have a lot of risk of being attacked. Web browsers need to be equipped with good security technologies like ASLR, and with

Mozilla abandoning the 64-bit version, Firefox will not be able to take advantage of the advanced security features mentioned above.

Stability

Firefox has now become oversized for 32-bit memory space. Because with the exception of plugins, everything Firefox does runs in the same process: all the tabs and windows you open, all images, code, and downloads share 4GB of memory. When you open too many tabs or when loading pages that are structured with complex code, or just because some of Firefox's own errors will result in the memory being allocated but not released even if no longer available use. Once the limit is reached, Firefox will slow down, slow down because it has to work more to get more memory and eventually, as usual - the browser crashes! Meanwhile, Firefox 64-bit, with the advantage of having more memory, will never fall into memory shortages.



Since version 13, Firefox developers have had several ways to improve the error such as on-demand page loading: when users restart the browser (with a series of previously opened tags), Firefox will only load pages that users click on. This saves memory but is only a temporary solution because when users need to open multiple websites at once, everything goes back to the old problem.

Of course, solving memory problems doesn't mean that Mozilla must force a 64-bit version to be developed, in other words, this is not the only solution. Mozilla can learn Google when making Chrome. Chrome for Windows is also only available in 32-bit versions (although Google may be trying to develop a separate 64-bit version), but on Chrome, each process is separated into separate tabs, memory pressure is Not as much as in Firefox, because instead of stuffing them all into using 4 GB of memory, the tags on Chrome have 4 GB of memory for themselves. However, developing a 64-bit version is still what Mozilla should do because it has just fixed the memory problem, and taken advantage of the advanced security features mentioned above.

Conclusion

While the 64-bit version has so many benefits, the reasons Mozilla offers for its resignation seem unreasonable. Because many developers still have a way to distinguish crashes between 32-bit and 64-bit versions, there's no reason Mozilla doesn't do this. The number of support plugins is not necessarily a solution. Look at Opera. Like Firefox, Opera also uses the same process for all web tags (instead of one tab like Chrome) and also runs plugins on separate processes. However, they have a way to allow 32-bit plugins to run on 64-bit versions. And obviously if you want, Mozilla can apply the same technology as Opera.

Mozilla has, and will continue to maintain, the 64-bit version of Firefox on Mac OS X and Linux, but has abandoned a large number of Windows users. As of November 2011, separately the number of 64-bit Firefox users on Windows 7 was larger than the total number of Firefox users on Mac OS X and Linux combined. The number of Nightly build users 64-bit is also larger than the number of 32-bit users. Therefore, Mozilla should continue to maintain the 64-bit version of Firefox and make it the preferred version. Firefox still has a lot of users and obviously they deserve to continue using the 64-bit version with peace of mind about security and stability.

You finished reading the article "**Why should I have Firefox 64-bit for Windows?**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.