I'm not robot

reCAPTCHA

Open

I'm not robot
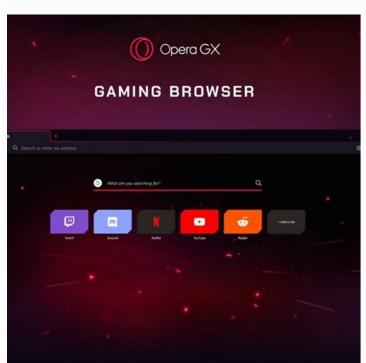
reCAPTCHA

Open

Using RoboHelp (2017 release)

Instead, they selected 2144.cn as a partner and released a special variant of Flash Player on a specific website,[187] which contains a non-closable process, known as the "Flash Helper Service", that collects private information and pops up advertisement window contents,[188] by receiving and running encrypted programs from a remote server.[189] The partnership started in about 2017, but in version 30, Adobe disabled the usage of vanilla (global) variant of Flash Player in mainland China,[190] forcing users to use that specific variant, which may pose a risk to its users due to China's Internet censorship.[191] This only affected Chinese Chromium based browser users, Firefox users, and Internet Explorer users using Windows 7 and below, as Microsoft still directly distributed Flash Player for Internet Explorer and Microsoft Edge through Windows Update in Windows 8 and upward at the time. Performance is similar to HTML5 video playback.[46][47] Also, Flash Player has been used on multiple mobile devices as a primary user interface renderer.[48] Compilation Although code written in ActionScript 3 executes up to 10 times faster than the prior ActionScript 2,[49] the Adobe ActionScript 3 compiler is a non-optimizing compiler, and produces inefficient bytecode in the resulting SWF, when compared to toolkits such as CrossBridge.[50][51][52][53][54] CrossBridge, a toolkit that targets C++ code to run within the Flash Player, uses the LLVM compiler to produce bytecode that runs up to 10 times faster than code the ActionScript 3 compiler produces, only because the LLVM compiler uses more aggressive optimization.[52][53][54] Adobe has released ActionScript Compiler 2 (ASC2) in Flex 4.7 and onwards, which improves compilation times and optimizes the generated bytecode and supports method inlining, improving its performance at runtime.[55] As of 2012, the Haxe multiplatform language can build programs for Flash Player that perform faster than the same application built with the Adobe Flex SDK compiler.[56][unreliable source?] Development methods Flash Player applications and games can be built in two significantly different methods: "Flex" applications: The Adobe Flex Framework is an integrated collection of stylable Graphical User Interface, data manipulation and networking components, and applications built upon it are termed "Flex" applications. Archived from the original on December 24, 2013. ^ a b Steve Jobs (April 29, 2010). (Macromedia later hired Nielsen to help them improve Flash usability.) The old Macromedia Flash Player logo Macromedia Flash Player 6 (version 6.0.21.0, codenamed Exorcist) (March 15, 2002) Support for the consuming Flash Remoting (AMF) and Web Service (SOAP) Supports ondemand/live audio and video streaming (RTMP) Support for screenreaders via Microsoft Active Accessibility Added Sorenson Spark video codec for Flash Video[193] Support for video, application components, shared libraries, and accessibility Macromedia Flash Communication Server MX, also released in 2002, allowed video to be streamed to Flash Player 6 (otherwise the video could be embedded into the Flash movie). Firefox 85, released on January 26, 2021, completely removed support for the Flash plugin.[127] Firefox ESR dropped support on November 2, 2021 (Firefox 78 ESR was the last version with support).[132] Microsoft Windows On October 27, 2020, Microsoft released an update (named KB4577586) for Windows 10 and 8.1 which removes the embedded Adobe Flash Player component from IE11 and Edge Legacy. Zii. community.adobe.com. Editors include Adobe Flash Builder and FlashDevelop. Archived from the original on May 20, 2007. Archived from the original on August 2, 2001. In October 2000, usability guru Jakob Nielsen wrote a polemic article regarding usability of Flash content entitled "Flash: 99% Bad". Whitequark.org. Archived from the original on March 30, 2019. Flash Player was used internally by the Adobe Integrated Runtime (AIR), to provide a cross-platform runtime environment for desktop applications and mobile applications. Archived from the original on May 14, 2013. ^ "Internet Security Threat Report: Volume XV: April 2010". Archived from the original on May 29, 2010. Java is a registered trademark of Oracle and/or its affiliates. ^ Vaughan-Nichols, Steven J. However, the most popular use of Flash among the 10-20 age group was for Flash games. ^ Venkat (June 16, 2019). Security and privacy. Adobe stated in 2013 that more than 400 million out of over 1 billion connected desktops update to the new version of Flash Player within six weeks of release.[18] However, Flash Player has become increasingly criticized for its performance, consumption of battery on mobile devices, the number of security vulnerabilities that had been discovered in the software, and its closed platform nature. Leaning Technologies. Retrieved January 20, 2021. Archived from the original on March 5, 2014. As of 2000, however, the Flash Player was already being distributed with all AOL, Netscape and Internet Explorer browsers. ^ "Security Advisory for Adobe Flash Player, Adobe Reader and Acrobat", published an open letter explaining why Apple would not support Flash on the iPhone, iPod touch, and iPad.[174] In the letter he blamed problems with the "openness", stability, security, performance, and touchscreen integration of the Flash Player as reasons for refusing to support it. "Adobe Flash is finally gone: The end arrives as Adobe starts blocking Flash content". Adobe (July 14, 2009). The company also stated it wants to enable Flash on NVIDIA Tegra, Texas Instruments OMAP 3, and Samsung ARMs.[98][99] Beginning 2009, it was announced that Adobe would be bringing Flash to TV sets via Intel Media Processor CE 3100 before mid-2009.[100] ARM Holdings later said it welcomes the move of Flash, because "it will transform mobile applications and it removes the claim that the desktop controls the Internet."[101] However, as of May 2009, the expected ARM/Linux netbook devices had poor support for Web video and fragmented software base.[102] Among other devices, LeapFrog Enterprises provides Flash Player with their Leapster Multimedia Learning System and extended the Flash Player with touch-screen support.[103] Version 9 was the most recent version available for the Linux/ARM-based Nokia 770/N800/N810 Internet tablets running Maemo OS2008.[89] Other versions of the player have been available at some point for Symbian OS and Palm OS.[104] The Kodak Easyshare One includes Flash Player. [105] The following table documents historical support for Flash Player on mobile operating systems: Platform Final version Android 4.0, ARM Cortex-A8+[91] Flash Player 11.1.115.81[80] Android 2.2-3.x, ARM Cortex-A8+[106][91] Flash Player 11.1.111.73[80] Dreamcast Flash Player 4.0[citation needed] Maemo Flash Player 9.4[107] PlayStation 3 with Firmware 2.50, NeoTrod 2.81 Flash Player 9.1 (update 3)[108] PSP with Firmware 2.70 Flash Player 6[109] Pocket PC 2003[110] Flash Player 7[111][112] webOS (Palm and HP) Flash Player 10[citation needed] Windows Mobile 5[110] Flash Player 7[111] Other hardware devices have Flash Player, including Chip8, [113] Commodore 64,[114] ZX Spectrum,[115] and the Nintendo Entertainment System.[116] They enable video games created for such platforms to run within Flash Player. The Guardian. ^ Tung, Liam (January 12, 2021). "Saying goodbye to Flash in Chrome". ^ "Downloads". Archived from the original on May 11, 2011. ^ Adobe Systems Incorporated (December 3, 2007) List of codecs supported by Adobe Flash Player Archived August 19, 2009, at the Wayback Machine, Retrieved on August 5, 2009 ^ Halfast, Todd. For the file format sometimes referred to as "Shockwave Flash", see SWF. ^ Claus Wahlers. McAfee predicted that Adobe software, especially Reader and Flash, would be primary target for attacks in 2010.[171] Adobe applications had become, at least at some point, the most popular client-software targets for attackers during the last quarter of 2009.[172] The Kaspersky Security Network published statistics for the third quarter of 2012 showing that 47.5% of its users were affected by one or more critical vulnerabilities.[173] The report also highlighted that "Flash Player vulnerabilities enable cybercriminals to bypass security systems integrated into the application."[173] Steve Jobs criticized the security of Flash Player, noting that "Symantec recently highlighted Flash for having one of the worst security records in 2009".[174] Adobe responded by pointing out that "the Symantec Global Internet Threat Report for 2009, found that Flash Player had the second lowest number of vulnerabilities of all Internet technologies listed (which included both web plug-ins and browsers)."[175][176] On April 7, 2016, Adobe released a Flash Player patch for a zero-day memory corruption vulnerability CVE-2016-1019 that could be used to deliver malware via the Magnitude exploit kit. Archived from the original on November 5, 2012. In July 2021, this update was automatically installed as a security patch.[133][134] However, an ActiveX Flash Player plugin may still be used with IE after this update is applied.[135][136] Apple Safari Apple dropped Flash Player support from Safari 14 alongside the release of macOS Big Sur.[137][138] Fallout Despite the years of notice, several websites still were using Flash following December 31, 2020, including the U.S. Securities and Exchange Commission. June 7, 2010. Archived from the original on April 25, 2010. December 3, 2007. With such technologies, the possibility of building a profile based on user statistics is considered by some a potential privacy concern. Red Ventures. Flash Player supports vector graphics, 3D graphics, embedded audio, video and raster graphics, and a scripting language called ActionScript. Archived from the original on July 9, 2013. Archived from the original on October 31, 2010. ^ Collins, Katie (March 11, 2016). ^ "Flip8 – the World's First Flash Emulator — v0.9". ^ Warren, Tom (January 20, 2021). Google verwendet Cookies und Daten für Folgendes:Dienste anbieten und betreiben, z. B. Zu personalisierten Inhalten und Werbeanzeigen gehören beispielsweise Dinge wie relevantere Ergebnisse und Empfehlungen, eine individuelle YouTube-Startseite und Werbung, die auf Ihre Interessen zugeschnitten ist.Klicken Sie auf „Anpassen", um sich Ihre Möglichkeiten anzusehen. Retrieved September 25, 2016. ^ Noyes, Katherine (April 6, 2012). McAfee Avert Labs. CBS Interactive. ^ "Flash Player 13.0.0.80". Adobe Flash Player Support Center. Certain websites, such as Digg, Flickr, and Photobucket already host a cross domain policy that permits Flash content to access their website via HTTP.[36] RTMP: Support for live audio and video streaming using the Real Time Messaging Protocol (RTMP) developed by Macromedia. ^ "And Then Premium Features Arrived...". Local storage in Flash Player allows websites to store non-executable data on a user's computer, such as authentication information, game high scores or web browser games, server-based session identifiers, site preferences, saved work, or temporary files. Various Chromium-based Chinese browsers will also continue to support Flash Player in PPAPI and/or NPAPI form, including, but not limited to, 360 Secure Browser. [135] Adobe Flash Player Projector Despite the end of general support for the global variant of Flash Player, the standalone version (also known as Adobe Flash Player Standalone) is still available for download from Adobe. ^ Cimpanu, Catalin. March 10, 2012. chinadigitaltimes.net (in Chinese (China)). ^ Laforge, Anthony (July 25, 2017). ^ "Flash Player官方下载中心". Retrieved February 5, 2021. (April 30, 2010) Adobe hits back at Apple's 'smokescreen' – Telegraph Blogs Archived May 3, 2010, at the Wayback Machine. ^ Stahie, Silviu (June 24, 2020). Archived from the original on March 29, 2017. See also Adobe AIR Adobe Shockwave Apache Flex Microsoft Silverlight References ^ "Adobe Flash Player". Adobe Systems. ^ "Flash Roadmap – The Chromium Projects". Flash Player is capable of viewing multimedia contents, executing rich Internet applications, and streaming audio and video. Retrieved November 2, 2012. ^ a b "Adobe Flash Player (China Variant)". Retrieved August 5, 2014. ^ Scott, Jason (November 22, 2020). March 12, 2013. ^ "Stage3D vs WebGL Performance — Airtight Interactive". ^ "关于大连车务段使用Flash出现问题的声明公告". Since 12 January 2021, Flash Player (original global variants) versions newer than 32.0.0.371, released in May 2020, refuse to play Flash content and instead display a static warning message.[12] Flash Player runs SWF files that can be created by Adobe Flash Professional, Adobe Flash Builder or by third-party tools such as FlashDevelop. ActionScript is based on ECMAScript (similar to JavaScript) and supports object-oriented code. JPEG-XR enables lossy and lossless compression with or without alpha channel transparency. April 2010. ^ a b "Adobe Flash Player - Debug Downloads". ^ "Adobe Flash Player Settings Manager". Retrieved June 22, 2020. MobileCrunch. ^ "Stage3D". Retrieved May 9, 2017. ^ "Flash Bug Report". (as in Simplified Chinese). ^ "Flash Player Issues | Windows 10 | Internet Explorer". Learn more Software for viewing multimedia, rich Internet applications, and streaming video and audio This article is about the player. ^ "Adobe Acrobat, Reader, and Flash Player Remote Code Execution Vulnerability". ^ "CheerpX For Flash". Retrieved May 19, 2020. Retrieved July 22, 2018.: "Uninstall 2144 Game Center | Adobe Community". Retrieved November 25, 2020. Retrieved May 5, 2012., Adobe Labs, "ASC performs few optimizations at this time". ^ Zotov, Peter (May 6, 2012). Archived from the original on June 8, 2010. Retrieved December 15, 2016. In addition, Flash Player can run from a web browser as a browser plug-in on supported mobile devices. This browser can access only a small set of SARS online pages containing Flash-based forms required for filing financial reports.[147] Internet Explorer 11, along with IE mode in Edge,[78] will continue with ActiveX support, and by extension Flash Player support.[136] Firefox forks that plan to continue NPAPI support, include Waterfox, Basilisk, Pale Moon, and K-Meleon. ^ "Adobe Flash Player Download". ^ rich Internet applications | Adobe Flash Platform runtimes Archived May 30, 2010, at the Wayback Machine. "South African government releases its own browser just to re-enable Flash support". May 10, 2021. August 31, 2016. February 2010. ^ "Flashplayer Is Incompatible With Your Area | Adobe Community". "Adobe to block Flash content from running on January 12, 2021". Pcworld.com. In August 2012, Adobe stopped updating Flash for Android.[92] Flash Player was supported on a select range of mobile and tablet devices, from Acer, BlackBerry 10, Dell, HTC, Lenovo, Logitech, LG, Motorola, Samsung, Sharp, SoftBank, Sony (and Sony Ericsson), and Toshiba.[93][94][95] As of 2012, Adobe has stopped browser-based Flash Player development for mobile browsers in favor of HTML5,[96][97] however, Adobe continues to support Flash content on mobile devices with the Adobe Integrated Runtime, which allows developers to publish content that runs as native applications on certain supported mobile phone platforms. www.chromium.org. Archived from the original on October 8, 2010. Electronics Weekly (May 2, 2008). Archived from the original on May 23, 2013. ^ "Harman's support program for Adobe Flash Player". Streaming protocols HTTP: Support for communicating with web servers using HTTP requests and POST data.[33] However, only websites that explicitly allow Flash to connect to them can be accessed via HTTP or sockets, to prevent Flash being used as a tool for cross-site request forgery,[34] cross-site scripting, DNS rebinding,[35] and denial-of-service attacks. April 5, 2016. Retrieved December 2, 2021. Retrieved May 18, 2012. Web browsers Google Chrome Starting from Chrome 76, Flash is disabled by default without any prompts to activate Flash content.[128] Users who wanted to play Flash content had to manually set a browser to prompt for Flash content, and then during each browser session enable Flash plugin for every site individually. "Adobe Uses DMCA to Nuke Project That Keeps Flash Alive, Secure & Adware Free". adobe.com (Press release). Flash (in Simplified Chinese). He also claimed that when one of Apple's Macintosh computers crashes, "more often than not" the cause can be attributed to Flash, and described Flash as "buggy".[184] Adobe's CEO Shantanu Narayen responded by saying, "If Flash [is] the number one reason that Macs crash, which I'm not aware of, it has as much to do with the Apple operating system." [185] Steve Jobs also claimed that a large percentage of the video on the Internet is supported on iOS, since many popular video sharing websites such as YouTube have published their Flash Player and Adobe AIR archived videos to playback in mobile web browsers even without Flash Player.[186] Mainland China-specific variant Starting with version 30, Adobe stopped distributing Flash Player directly to users from mainland China. www.flash.cn. "Safari 14 removes Flash, gets support for breach alerts, HTTP/3, and WebP". ^ Introducing Molehill: 3D APIs for Adobe Flash Player and Adobe AIR Archived July 8, 2012, at the Wayback Machine, Adobe Edge ^ Extending AIR Archived July 24, 2014, at the Wayback Machine, Adobe Devnet ^ "Flash Player 11.1 and AIR 3.1 User Release Notes: 11/09/11". December 2009. Retrieved September 24, 2010. ^ Maxwell, Andy (October 12, 2021). ^ a b "_flash_install packages ". Archived from the original on December 12, 2007. AIR supports installable applications on Windows, Linux, macOS, and some mobile operating systems such as iOS and Android. Retrieved January 3, 2021. Archived from the original on August 28, 2012. Zhongcheng Network Technology Co., Ltd. Archived from the original on August 10, 2014. Slate. ^ "Adobe acknowledges critical security flaw in software". "Flash. Retrieved August 4, 2014. Retrieved February 15, 2021. Since the AMF format specification is published, data can be transferred to and from Flash applications using AMF datasets instead of JSON or XML, reducing the need for parsing and validating such data. Retrieved June 30, 2012. Archived from the original on December 20, 2016. p. 130. Flash Builder 4.5 Archived December 22, 2014, at the Wayback Machine. ^ Flash 4.5 vs Pure AS3 Archived October 21, 2011, at the Wayback Machine, Michael Crosby ^ a b "Adobe donates Flex to Apache". www.aminlab.com/. Techworld. "Pure ActionScript" applications: Applications built without the Flex framework allow greater flexibility and performance.[57][58][59] Video games built for Flash Player are typically pure-Actionscript projects. Retrieved December 8, 2020. Extended support for Flash player 11.2.0 on Solaris as it is the last version to be supported.[80] Adobe replaced Extended Support Release 11.2 on Linux with 24.0 on December 13, 2016. GIF: Support for decoding and rendering compressed Graphics Interchange Format (GIF) images, in its single-frame variants only. Archived from the original on November 18, 2016. ^ Comparing Flash, HTML5 Performance Archived October 26, 2011, at the Wayback Machine, OS News ^ Battery Performance with Flash Player 10.1 on Nexus One Archived October 16, 2011, at the Wayback Machine, Flash Mobile Blog ^ Reference Designs and Demos Archived October 11, 2011, at the Wayback Machine, QNX ^ ActionScript 3.0 overview, "ActionScript 3.0 code executes up to 10 times faster than legacy ActionScript code." Archived July 18, 2014, at the Wayback Machine, Adobe ^ "Alchemy:FAQ". AMF: Flash Player allows application data to be stored on users computers, in the form of Local Shared Objects, the Flash equivalent to browser cookies.[23] Flash Player can also natively read and write files in the Action Message Format, the default data format for Local Shared Objects. Flash applications must specifically be built for the AIR runtime to use additional features provided, such as file system integration, native client extensions, native window/screen integration, taskbar/dock integration, and hardware integration with connected Accelerometer and GPS devices.[22] Data formats Flash Player included native support for many data formats, some of which can only be accessed through the ActionScript scripting interface. Users can disable or restrict use of local storage in Flash Player through a "Settings Manager" page.[159][160] These settings can be accessed from the Adobe website or by right-clicking on Flash-based content and selecting "Global Settings". Archived from the original on April 24, 2011. ^ "Flash Player 12.0.0.3". Archived from the original on November 18, 2011. November 14, 2013. Retrieved July 26, 2017. May 17, 2010. Archived from the original on July 5, 2016. Airtightinteractive.com. ^ YouTube Mobile Gets a Kick Start Archived January 7, 2012, at the Wayback Machine, Official YouTube Blog ^ "Flash Player官方下载-Flash中国官网". Archived from the original on June 2, 2007. ^ a b "Flash Player 3 Archive". ^ "IT之家| 中国特供版Flash播放器将无删「搜集用户隐私、中国数字时代". April 23, 2011. ^ "Update on Adobe Flash Player End of Support". ^ "features Flash Player 10.3 Release Notes". For an overview of the platform, see Adobe Flash. Symantec's Internet Security Threat Report[169] states that a remote code execution in Adobe Reader and Flash Player[170] was the second most attacked vulnerability in 2009. Macromedia Flash Player 5 (August 24, 2000) A major advance in ability, with the evolution of Flash's scripting abilities as released as ActionScript Saw the ability to customize the authoring environment's interface Macromedia Generator was the first initiative from Macromedia to separate designs from content in Flash files. ^ Press Room: For immediate release Archived August 16, 2014, at the Wayback Machine. Mozilla. Adobe said it will optimize Flash for use on ARM architecture (ARMv7 and ARMv6 architectures used in the Cortex-A series of processors and in the ARM11 family) and release in the second half of 2009. ^ ARM welcomes Adobe's mobile Flash move – 5/2/2008 Archived February 20, 2009, at the Wayback Machine. Local storage can be disabled entirely or on a site-by-site basis. ^ "Release Notes - Flash Player 33". Internet Explorer 11 and Microsoft Edge Legacy, in Windows 8 and later, along with Google Chrome on all versions of Windows, came bundled with a sandboxed Flash plug-in.[13][14][15][16][17] Flash Player once had a large user base, and was a common format for web games, animations, and graphical user interface (GUI) elements embedded in web pages. ActionScript 3 also supports ECMAScript for XML (E4X), which allows XML data to be manipulated more easily. Archived from the original on July 25, 2017. ^ ARM netbooks struggle with video, apps Archived July 12, 2012, at the Wayback Machine. ^ "重启网络" [Flash Center]. Archived from the original on May 25, 2014. Archived from the original on January 6, 2013. ASVGuy. ^ "Security Advisory for Adobe Flash Player". ^ Update: Premium Features for Flash Player Archived July 19, 2014, at the Wayback Machine. Adobe AIR and FP Blog ^ "Why will Premium Flash Player Features Kill Flash?". Flash Player is distributed as freeware. ^ "11/11/2014 - Release - Flash Player 15". ^ Response to "Thoughts on Flash" Archived November 12, 2011, at the Wayback Machine, "Adobe Gaming SDK". To play Flash content, users had to manually set a browser to prompt for Flash content, and then during each browser session enable Flash plugin for every site individually. Adobe. ^ "Macromedia - Macromedia Web Players: Alternates". Retrieved August 21, 2019. ^ a b "End of support for Adobe Flash | Firefox Help". ^ Debre, Elena (February 5, 2021). February 6, 2010. Retrieved March 25, 2017. Archived from the original on April 4, 2012. Adobe Flash PlayerOriginal author(s)FutureWaveMacromediaDeveloper(s)Adobe Inc.ZhongchengHarmanInitial releaseJanuary 1, 1996; 26 years ago (1996-01-01)Stable release(s) [±]Windows, macOS (China-specific variant)34.0.0.211[1] / December 14, 2021; 55 days ago (2021-12-14)[2]Windows, macOS, Linux (HARMAN enterprise variant)50.x[3] / 2021; 1 year ago (2021)Linux (China-specific variant)34.0.0.137[4][5] / April 13, 2021; 9 months ago (2021-04-13)[2]Windows, macOS, Linux, Chrome OS (Global variant, excluding China)32.0.0.465[6] / December 8, 2020; 13 months ago (2020-12-08)[7]Internet Explorer 11 and Edge Legacy (Embedded - Windows 8 and later)32.0.0.445[6] / October 13, 2020; 15 months ago (2020-10-13)[7]Android 4.0.x11.1.115.81 / September 10, 2013; 8 years ago (2013-09-10)[7]Android 2.x and 3.x11.1.111.73 / September 10, 2013; 8 years ago (2013-09-10)[7]Solaris11.2.202.223 / March 28, 2012; 9 years ago (2012-03-28)[7]Preview release(s) [±]Windows, macOS, Linux, Chrome OS32.0.0.380 Beta / May 14, 2020; 20 months ago (2020-05-14)[8] Written inActionScriptOperating systemWindows, macOS, Linux, Chrome OS, Solaris, BlackBerry Tablet OS, Android, Pocket PCPlatformWeb browsers and ActiveX-based softwareAvailable inChinese Simplified, Chinese Traditional, English, French, German, Italian, Japanese, Polish, Russian, Portuguese, Spanish, Korean, Turkish, Xhosa, Telugu, Vietnamese, Afrikaans, Yiddish, Zulu, and Arabic[9]TypeRuntime system and browser extensionLicenseFreewareWebsiteAdobe Flash Player HARMAN official website (active, China-specific variant) Adobe Flash Player China official website (active, China-specific variant) Adobe Flash Player (formerly Macromedia Flash Player and FutureSplash Player, and known in Internet Explorer, Firefox, and Google Chrome as Shockwave Flash)[10] is computer software for content created on the Adobe Flash platform. ^ "List of Flash Gaming Engines". Retrieved February 22, 2010. MainConcept. ^ a b "Flash Player Debug Downloads (China-specific)". Archived from the original on March 31, 2012. Loading a multi-frame GIF will display only the first image frame. Archived from the original on February 6, 2010. ^ "Macromedia Flash Player download center (Linux)". Retrieved January 17, 2021. msfn.com. Retrieved on March 11, 2011. Archived from the original on March 16, 2012. Archived from the original on April 30, 2012. Flex 1.0 and Breeze 1.0 were released, both of which used the Flash Player as a delivery method but relied on tools other than the Flash authoring program to create Flash applications and presentations. Adobe.com. The install-base of the Flash Player reached 92 percent of all Internet users. Flash Player 10 added support for the JPEG-XR advanced image compression standard developed by Microsoft Corporation, which results in better compression and quality than JPEG. p. 205. Adobe.com (July 14, 2009). Retrieved July 22, 2018.:

^ "Adobe's 'Partner' 2144 in China has suspicious ... The Verge. ^ "What Is a Local Shared Object?". FLV files can be played back from a server using HTTP progressive download, and can also be embedded inside an SWF file. ^ Mobile and Devices Developer Center: Sony PSP Archived May 25, 2010, at the Wayback Machine. Retrieved January 12, 2015. ^ a b c Adobe Flash Player Versions Archived January 1, 2019, at the Wayback Machine. ^ a b c d e f g h i j k l m n o p q r s Archived Flash Player versions". October 15, 2009. labs.adobe.com Archived from the original on June 20, 2010. Retrieved April 1, 2021. Notable online video games developed in Flash include Angry Birds, FarmVille, and AdventureQuest (started in 2002, and still active as of 2020).[69] Availability Desktop platforms Adobe Flash Player is available in two major flavors: The plugin version for use in various web browsers (the "projector" version is a standalone player that can open SWF files directly.[70][71] On February 22, 2012, Adobe announced that it would no longer release new versions of NPAPI Flash plugins for Linux, although Flash Player 11.2 would continue to receive security updates.[72][73][74] In June 2016 Adobe announced that, beginning with version 24, it would resume distribution of Flash Player on macOS and Windows as a version of Flash Player kept up to date with security updates, but none of the new features or bug fixes available in later versions. ^ "Flash vulnerability rewarded for Android, fix coming November 9th". ^ a b "IT Threat Evolution: Q3 2012". CRC Press. Archived from the original on August 1, 2017. The same report also recommended using browser extensions to disable Flash Player usage on untrusted websites. October 14, 2008. "Adobe Activation". ^ "Adobe Dives Deeper into Social Software". As of 2021, most of these technologies are considered obsolete. Flash Video can also be streamed via RTMP using the Adobe Flash Media Server or other such server-side software. ^ SWX: SWF Data Format Archived August 17, 2012, at the Wayback Machine, official website ^ swxjava - SWX RPC implementation in Java Archived June 7, 2014, at the Wayback Machine, Google Code ^ swx-format - Data Format Archived August 3, 2014, at the Wayback Machine, Google Code ^ SWX Content Winners Archived August 18, 2012, at the Wayback Machine, Format Website ^ Introducing SWXml Archived November 12, 2007, at the Wayback Machine, Aral Balkan ^ "Flash H.264". flash.io. Retrieved May 20, 2021. Retrieved July 7, 2013. Adobe Flash 11 Stage3D (Molehill) Game Programming Beginner's Guide. ^ "Security updates available for Adobe Flash Player". Development tools Adobe provides five ways of developing applications for Flash Player: Adobe Animate: graphic design, animation and scripting toolset Adobe Flash Builder: enterprise development and debugging Adobe Scout: visual profiler for performance optimization Apache Flex: a free SDK to compile Flash and Adobe AIR applications from source code; developed by Adobe and donated to the Apache Foundation[62] CrossBridge: a free SDK to cross-compile C++ code to run in Flash Player Third-party development environments are also available: FlashDevelop: an open-source ActionScript IDE, which includes a debugger for AIR applications PowerFlasher FDT: a commercial ActionScript IDE CodeDrive: an extension to Microsoft Visual Studio 2010 for ActionScript 3 development and debugging MTASC: a compiler Haxe: a multi-platform language[62] Game development Adobe Gaming SDK 1.0 logo Adobe offers the free Adobe Gaming SDK, consisting (as of August 2014[update]) of several open-source AS3 libraries built on the Flash Player Stage3D APIs for GPU-accelerated graphics.[64] Away3D: GPU-accelerated 3D graphics and animation engine Starling: GPU-accelerated 2D graphics that mimics the Flash display list API Features: GPU-accelerated skinnable GUI library built on top of Starling Dragon Bones: GPU-accelerated 2D skeletal animation library A few commercial game engines target Flash Player (Stage3D) as run-time environment, such as Unity 3D[65] and Unreal Engine 3.[66][page 3][66] Before the introduction of Stage3D, a number of older 2D engines or isometric engines like Flixel saw their heyday.[67] Adobe also developed the CrossBridge toolkit which cross-compiles C/C++ code to run within the Flash Player, using LLVM and GCC as compiler backends, and high-performance memory-access opcodes in the Flash Player thermal "Domain Memory") to work with in-memory data quickly.[68] CrossBridge is targeted toward the game development industry, and includes tools for building, testing, and debugging C/C++ projects in Flash Player. Electronista (November 17, 2008). RTMP> Beginner's Guide to Distributing Flash Video Archived March 13, 2013, at the Wayback Machine. Adobe Press ^ Cross-domain policy file usage recommendations for Flash Player Archived June 24, 2012, at the Wayback Machine, Adobe ^ A Policy file changes in Flash Player 9 and Flash Player 10 Archived August 18, 2014, at the Wayback Machine, Adobe ^ "Sites which support crossdomain.xml to allow Flash and Silverlight access". Microsoft Edge, which is based on Chromium, will follow the same plan as Google Chrome blocked the Flash plugin as "out of date" in January 2021, and fully removed it from the browser with Chrome version 88, released on January 20, 2021. [130][131] Mozilla Firefox Starting with Firefox 85,[128] Flash is disabled by default without any prompts to activate Flash content. TCP: Support for Transmission Control Protocol (TCP) Internet socket communication to communicate with any type of server, using stream sockets. Archived November 29, 2010. Retrieved July 22, 2018. Archived from the original on January 27, 2010. ^ Adobe Premium Features for Flash Player Archived August 21, 2014, at the Wayback Machine, Flash Player Dev Center, Adobe ^ Cassella, Dena (February 1, 2010). gHacks Tech News. Archived from the original on October 20, 2012. In theory, these repacks should provide users outside of China with the latest security updates to Flash Player, without having to deal with invasive advertisements or worry about privacy risks.[145] On such project, "Clean Flash Installer", was served a DMCA takedown from Adobe in October 2021.[146] Shortly after Flash EOL, South Africa Revenue Service (SARS) released a custom version of Chromium browser with Adobe Flash "time bomb" removed. FutureWave Software, Inc. p. 16. ^ Tareq Aljaber (May 17, 2013). ^ "Adobe Flash Runtimes Statistics". In February 2010, Adobe officially apologized[162] for not fixing a known vulnerability for over a year. Condé Nast. ^ "The End of an Era - Next Steps for Adobe Flash". Archived from the original (PDF) on June 2, 2010. Archived from the original on August 8, 2014. Version 10 added a limited form of support for shaders on materials in the form of the Pixel Bender API, but still did not have GPU-accelerated 3D vertex processing.[41] A significant change occurred in version 11, which added a new low-level API called Stage3D (initially codenamed Molehill), which provides full GPU acceleration, similar to WebGL.[42][43] The partial support for GPU acceleration in Pixel Bender was completely removed in Flash 11.8, resulting in the disruption of some projects like MIT's Scratch, which lacked the manpower to recode their applications quickly enough.[44][45] Current versions of Flash Player are optimized to use hardware acceleration for video playback and 3D graphics rendering on many devices, including desktop computers. Retrieved March 13, 2015. "The Curious Case of FlashHelperService - Updated". ^ a b c "MACROMEDIA INTRODUCES FREE FLASH PLAYERS FOR LINUX, SOLARIS, IRIX USERS. Archived from the original on October 15, 2008. Adobe Flash Player 11.3 (version 11.3.300.257) (June 8, 2012) Adobe Flash Player 11.3 (version 11.3.300.262) (June 21, 2012) Adobe Flash Player 11.3 (version 11.3.300.265) (July 11, 2012) Adobe Flash Player 11.3 (version 11.3.300.268) (July 26, 2012) Adobe Flash Player 11.3 (version 11.3.300.270) (August 4, 2012) Desktop and mobile Fullscreen interactive mode (keyboard input during fullscreen) Native bitmap encoding and compression (PNG, JPEG, JPEG-XR) Draw bitmaps with quality (low, medium, high, best) Texture streaming for Stage3D Dropped support for Linux and Solaris Mobile-only Auto-orientation on specific devices USB debugging for AIR on iOS Adobe Flash Player 11.3 (version 11.3.300.271) (September 18, 2012) Adobe Flash Player 11.3 (version 11.3.300.273) (October 3, 2012) Adobe Flash Player 11.4 (version 11.4.402.259) (August 10, 2012) Flash Player only ActionScript workers SandboxBridge support Concurrency improvements Compressed texture with alpha support for Stage3D ANT encoding AIR-only Deprecated Carbon APIs for AIR Direct AIR deployment using ADT Push notifications for iOS Ambient light sensor support Native Extensions for iOS Adobe Flash Player 11.4 (version 11.4.402.265) (August 21, 2012) Adobe Flash Player 11.4 (version 11.4.402.278) (September 18, 2012) Adobe Flash Player 11.4 (version 11.4.402.287) (October 8, 2012) Adobe Flash Player 11.5 (version 11.5.[208] Shared ByteArray Invoke Event enhancement (for openurl) Packaging multiple libraries in an ANE (iOS) Debug stack trace in release builds of Flash Player Statically link DRM (desktop only) Adobe Flash Player 11.5 (version 11.5.502.135) (October 8, 2012) Adobe Flash Player 11.6 (version 11.6.602.168) (February 26, 2013) Lossless video export from standalone and authplay.dll Support for flash.display.graphics.readGraphicsData() that returns a Vector of IGraphicsData Improve permissions UI related to full screen keyboard access Prevent ActiveX abuse in Office documents Support file access in cloud on Windows Enhance multi-SWF support Migration certification for AIRs RectangleTexture File API update so AIR apps conform to Apple data storage guidelines Separate sampler state for Stage3D Set device specific Retina Display resolution in AIR iOS apps (version 11.7.700.169, codenamed Geary) (April 9, 2013)[208] SharedObject.preventBackup property forceCPURenderModeForDevices Remote hosting of SWF files in case of multiple SWFs Support for uploading 16-bit texture formats GameInput updates AIR/OS4 - create captive runtime apps Adobe replaced Extended Support Release 11.7 on Mac and Windows with 13.0 on May 13, 2014.[209] Adobe Flash Player 11.8 (codenamed Harrison)[208] Stage3D baselineExtended profile Recursive stop on MovieClip Flash Player & AIR Desktop Game Pad Support for large textures (extendedBaseline, 4096) Rectangle texture DatagramSocket ServerSocket Substitute a redirected URL from a source URLRequest for part of the URL in a new URLRequest Adobe Flash Player 12 (codenamed Irving)[208] OS X Retina support Mac .pkg Installation Support Adobe Flash API update so AIR apps conform to Apple data storage guidelines New supported character sets for Stage3D Support for the work flow and UI Support for Safari 6.1 and higher 64-bit PPAPI Flash Player for Google Chrome Graphics: Buffer Usage flag for Stage3D Adobe Flash Player 13 (codenamed King)[211][212] Supplementary Characters Enhancement Support for Text Field Full Screen video message tweak As of 13 May 2014[update] this is the Extended Support Release. [209] Adobe Flash Player 14 (version 14.0.0.125, codenamed Lombard) (June 10, 2014)[213] Stage 3D Standard Constrained Profile Flash Player 14 (version 14.0.0.179) (August 12, 2014) Adobe Flash Player 15 (version 15.0.0.152, codenamed Market) (September 9, 2014)[214] Improved support for browser zoom levels Adobe Flash Player 15 (version 15.0.0.167) (September 23, 2014) Adobe Flash Player 15 (version 15.0.0.223) (November 11, 2014) Adobe Flash Player 16 (version 16.0.0.235, codenamed Nemo) (December 9, 2014)[215] Stage3D - Standard Constrained Profile PPAPI Installers for Windows and Mac Adobe Flash Player 16 (version 16.0.0.257) (January 13, 2015) Adobe Flash Player 16 (version 16.0.0.287) (January 22, 2015) Adobe Flash Player 16 (version 16.0.0.296) (January 27, 2015) Adobe Flash Player 17 (version 17.0.0.134, codenamed President) (March 12, 2015)[216] Control Panel improvements Installer improvements for Mac Adobe Flash Player 17 (version 17.0.0.169) (April 14, 2015) Adobe Flash Player 17 (version 17.0.0.188) (May 12, 2015) Adobe Flash Player 18 (version 18.0.0.160) (June 9, 2015) Contains fixes for Adobe Security Bulletin APSB-15-11[217] Adobe Flash Player 18 (version 18.0.0.194) (June 23, 2015) Adobe Flash Player 18 (version 18.0.0.203) (July 8, 2015) Adobe Flash Player 18 (version 18.0.0.209) (July 14, 2015) Adobe Flash Player 18 (version 18.0.0.232) (August 11, 2015) Adobe Flash Player 19 (version 19.0.0.185, codenamed Quist) (September 21, 2015) Adobe Flash Player 19 (version 19.0.0.207) (October 13, 2015) Adobe Flash Player 19 (version 19.0.0.226) (October 16, 2015) Adobe Flash Player 19 (version 19.0.0.245) (November 10, 2015) Adobe Flash Player 20 (version 20.0.0.228, codenamed Rankin) (December 8, 2015) Adobe Flash Player 20 (version 20.0.0.267) (December 28, 2015) Adobe Flash Player 20 (version 20.0.0.270) (January 1, 2016) Adobe Flash Player 20 (version 20.0.0.286) (January 19, 2016) Adobe Flash Player 20 (version 20.0.0.306) (February 9, 2016) Adobe Flash Player 21 (version 21.0.0.182, codenamed Sutter) (March 10, 2016) Adobe Flash Player 21 (version 21.0.0.197) (March 23, 2016) Adobe Flash Player 21 (version 21.0.0.213) (April 7, 2016) Adobe Flash Player 21 (version 21.0.0.216) (April 21, 2016) Adobe Flash Player 21 (version 21.0.0.226) (May 12, 2016) Adobe Flash Player 21 (version 21.0.0.242) (May 26, 2016) Adobe Flash Player 22 (version 22.0.0.185, codenamed Townsend) (June 16, 2016) Adobe Flash Player 22 (version 22.0.0.209) (July 12, 2016) Adobe Flash Player 23 (version 23.0.0.162) (September 13, 2016) Adobe Flash Player 23 (version 23.0.0.185) (September 21, 2016) Adobe Flash Player 23 (version 23.0.0.205) (October 11, 2016) Adobe Flash Player 23 (version 23.0.0.207) (November 8, 2016) Adobe Flash Player 24 (version 24.0.0.186, codenamed Van Nes) (December 13, 2016) Adobe Flash Player 24 (version 24.0.0.194) (January 10, 2017) Adobe Flash Player 24 (version 24.0.0.221) (February 14, 2017) Adobe Flash Player 25 (version 25.0.0.127, codenamed Webster) (March 14, 2017) Adobe Flash Player 25 (version 25.0.0.148) (March 21, 2017) Adobe Flash Player 25 (version 25.0.0.163) (April 20, 2017) Adobe Flash Player 25 (version 25.0.0.171) (May 9, 2017) Adobe Flash Player 26 (version 26.0.0.126, codenamed York) (June 13, 2017) Adobe Flash Player 26 (version 26.0.0.131) (June 16, 2017) Adobe Flash Player 26 (version 26.0.0.137) (July 11, 2017) Adobe Flash Player 26 (version 26.0.0.151) (August 8, 2017) Adobe Flash Player 27 (version 27.0.0.130, codenamed Zoe) (September 12, 2017) Adobe Flash Player 28 (version 28.0.0.137) (January 9, 2018) Adobe Flash Player 28 (version 28.0.0.161) (February 6, 2018) Adobe Flash Player 29 (version 29.0.0.113, codenamed October) (March 13, 2018) Adobe Flash Player 29 (version 29.0.0.140) (April 10, 2018) Adobe Flash Player 30 (version 30.0.0.113, codenamed Zarco) (June 7, 2018) Adobe Flash Player 30 (version 30.0.0.134) (July 10, 2018) Adobe Flash Player 30 (version 30.0.0.154) (August 8, 2018) Adobe Flash Player 31 (version 31.0.0.108, codenamed President) (September 11, 2018) Adobe Flash Player 31 (version 31.0.0.122) (October 9, 2018) Adobe Flash Player 31 (version 31.0.0.148) (November 13, 2018) Adobe Flash Player 31 (version 31.0.0.153) (December 5, 2018) Adobe Flash Player 32 (version 32.0.0.101) (January 8, 2019) Adobe Flash Player 32 (version 32.0.0.142) (February 12, 2019) Adobe Flash Player 32 (version 32.0.0.156) (March 12, 2019) Adobe Flash Player 32 (version 32.0.0.171) (April 9, 2019) Adobe Flash Player 32 (version 32.0.0.192) (May 14, 2019) Adobe Flash Player 32 (version 32.0.0.207) (June 11, 2019) Adobe Flash Player 32 (version 32.0.0.223) (July 9, 2019) Adobe Flash Player 32 (version 32.0.0.238) (August 13, 2019) Adobe Flash Player 32 (version 32.0.0.255) (September 10, 2019) Adobe Flash Player 32 (version 32.0.0.270) (October 8, 2019) Adobe Flash Player 32 (version 32.0.0.314) (November 12, 2019) Adobe Flash Player 32 (version 32.0.0.321) (January 1, 2020) Adobe Flash Player 32 (version 32.0.0.330) (February 11, 2020) Adobe Flash Player 32 (version 32.0.0.344) (March 10, 2020) Adobe Flash Player 32 (version 32.0.0.363) (April 14, 2020) Adobe Flash Player 32 (version 32.0.0.387) (May 12, 2020) Adobe Flash Player 32 (version 32.0.0.403) (June 9, 2020) Refuses to play Flash content after January 12, 2021, and instead displays a static warning message. MP3 files can be accessed and played back from a server via HTTP, or embedded inside an SWF file, which is also a streaming format. Retrieved February 18, 2021. Archived from the original on March 22, 2015. Android users have been recommended to disable Flash or make it only on demand.[166] Subsequent security vulnerabilities exposed Android users, such as the two critical vulnerabilities published in March 2013,[168] all of which could lead to arbitrary code execution. Adobe (July 16, 2007). In August 2016, Adobe discontinued the ESR branch and instead focused only the standard release.[76] Release history for desktop operating systems Operating system Latest version Support status Windows XP SP2-11 34.0.0.211 (China-specific)[77]50.x (HARMAN enterprise)[78]32.0.0.465 (last public update, excluding China)[79] 2017–present2021–present2001–2020 2000 and XP RTM-SP1 11.1.102.55 and 10.3.183.90[80] 1999-2013 98, ME and 2000 RTM-SP2 9.0.289.0[80] 1998–2011 95 and NT 4 (A-32) 7.0.14.0[80] 1997–2005 3.1 3.0[81] 1997-1998 macOS 10.12 and later 5.0.41.6[82] 34.0.0.211 (China-specific)[77] 50.x (HARMAN enterprise)[78]32.0.0.465 (last public update, excluding China)[79] 2021-present2021-present 2013-2020 10.6-10.11 32.0.0.465 (last public update, excluding China-specific)[83]32.0.0.137 (last public update, excluding China)[79] 2021-present2020 10.9.29.0.0.171[88] 2013-2018 10.6-10.10 18.0.0.232[84] 2011-2015 (32-bit) Mac OS X 10.4-10.5 10.3.183.10[85] 1997-1998 Linux desktops 4.0r12[83][84] 50.x (HARMAN enterprise)[78]34.0.0.137 (last public update, excluding China)[79] 1997-present 2021-present2020 10.9.29.0.0.171[88] 2013-2018 10.6-10.10 18.0.0.232[84] 2011-2015 (32-bit) GNU/Linux 24.0.0.221[88] ARM-specific Linux desktops 4.0r12[83][84] 50.x (HARMAN enterprise)[78] 1997-present Linux 11.1.102.55 and 10.3.183.90[80] 1999-2013 10.3.183.20[89] 2005-2011 10.1-10.3 9.0.289.0[80] 2001-2011 Classic Mac OS 7.6.1-9.2.2 (PowerPC) 7.0.14.0[80] 1997-2005 7.6.1-8.1 (68k) 3[81] 1997-1998 Linux 64-bit 10.0.32.18[80] 64-bit present 2017-2021[86][99-2020 Solaris and OpenSolaris 4.0r12[83] 11.2.202.223 and 10.3.183.90[80] 2006-2013 IRIX 4.0r12[83][84] 4.0r12[83][84] 4.0r12[83][84] 1.0[88][88]90 The software have been available at some point for BeOS (citation needed) Mobile platforms See also: Adobe Integrated Runtime and Adobe Flash Lite In 2001, Flash Player had emerged as the de facto standard for online video publishing on the desktop, with adaptive bitrate video streaming, DRM, and fullscreen support.[30][31] On mobile devices, however, after Apple refused to allow the Flash Player within the inbuilt iOS web browser, Adobe changed strategy, enabling Flash content to be delivered as native mobile applications using the Adobe Integrated Runtime. www.adobe.com. Archived from the original on January 5, 2001. ^ "Adobe Security Bulletin". ^ Smedberg, Benjamin (July 25, 2017). ^ "FlashZXSpectrum48k, Sinclair ZX Spectrum Emulator written in Flash". Retrieved June 18, 2007. Windows Blogs. ^ "Download Flash Player 32 Beta". Retrieved November 17, 2011. ^ Adobe. Activation: ActiveX technologies were affected by 134 vulnerabilities, which was the highest among the plug-in technologies examined. Retrieved June 16, 2019. ^ Melanson, Mike (December 4, 2007). ^ "Help / Uninstall (old-version) Flash Player (all installations is unsuccessful)". Archived August 19, 2012, at the Wayback Machine, Unit Zero One ^ Introducing AS2 2.0 Archived March 15, 2013, at the Wayback Machine, Thibault Imbert, ByteArray.com ^ AS3 vs haXe performance, SplashDust website Archived January 5, 2013, at the Wayback Machine ^ Optimizing performance of Applications for connected TVs Archived August 22, 2016, at the Wayback Machine, Adobe Developer Connection ^ Top 10 Performance killers ^ "Flash PHP" ^ Flex versus ActionScript - the debate gets new life Archived December 9, 2014, at the Wayback Machine, Greg's Ramblings ^ Pure ActionScript 4 MadComponents vs. ^ Adobe Releases Last Linux Version of Flash Player – Slashdot. It continues to be able to play all supported Flash file formats, including SWF files.[148][149][150] Flash-based games are often created using Flash Content preservation projects The Internet Archive hosts some Flash content and makes it playable in modern browsers via emulators, Ruffle and Emularity.[149] Other emulators, such as CheerpX, also exist as options for Flash games on other sites.[150] BlueMaxima's Flashpoint project aims to have collected more than 38,000 Adobe Flash Player games and animations and made them available for download.[151] Open source Adobe has released some components of Adobe Flash products as open source software via Open Screen Project or donated them to open source organizations. theverge.com. ^ Adobe will finally kill Flash in 2020". ^ "Shockwave Flash" redirects here. Retrieved October 14, 2008. Archived from the original on May 14, 2012. ^ "Every Flash game disappears forever in 2020 - but this project has preserved 38,000 of them". Flash 6 can emulate a PNG bitmap via ActionScript. ^ "Adobe Help Resources". Adobe Labs ^ a b Optimizing ActionScript Bytecode using LLVM Archived May 11, 2012, at the Wayback Machine, Haxe. Project ^ "Adobe update on 6/12/18 include 2144 game certo... February 7, 2013. ^Where can I find the "Extended Support Release" of Flash Player for Windows or Macintosh?". ^ "McAfee Threats Report: Fourth quarter 2009" (PDF). Release history Adobe Flash Player version history FutureSplash Player 1.1[192] New scripting features Option to disable the sound and memory management features optimizations for background audio Support of atmost sound, enhanced bitmap migration, buttons, the Library, and the ability to tween color changes Macromedia Flash Player 3 (May 31, 1998) Added alpha transparency, licensed MP3 compression Brought improvements to animation, playback, digital art, and publishing, as well as the introduction of simple script commands for interactivity Macromedia Flash Player 4 (June 15, 1999) Saw the introduction of streaming MP3s and the Motion Tween. September 4, 2020. AIR also includes added features such as file system integration, native desktop integration, and hardware integration with connected devices. April 7, 2016. ^ For Adobe Flash, Internet Explorer 8.0 Users: Only Choice | PCWorld Business Center" Doc". ^ "You can now uninstall Flash on Windows 10 and 8.1 using KB4577586". ^ Barrett, Brian (July 15, 2015). ^ Google's new Chrome 68 update improves dark mode, removes FTP and Adobe Flash". adobe.com. Currently, it's developed and distributed by Zhongcheng for users in China, and by HARMAN International for enterprise users outside of China, in collaboration with Adobe. Retrieved October 20, 2015. ^ a b "Adobe – Flash Player". Minerva Labs. Retrieved October 31, 2010. April 5, 2012. "Reaching the maturity" of Adobe Stupidity Player? Tiring the Limits of Adobe ^ RTMP supports a non-encrypted version over the Transmission Control Protocol (TCP) or an encrypted version over a secure Transport Layer Security (SSL) connection. June 26, 2018. Retrieved January 23, 2014. ^ AIR 3 Archived August 21, 2014, at the Wayback Machine. Adobe ^ "Help & About Adobe Flash Player". scratch.mit.edu. However, many educational materials and did not have a path forward for replacement.[139] Post-EOL support Adobe has partnered with HARMAN to support enterprise Flash Player users until at least 2023.[140][141] The HARMAN Flash player variant is labeled as version 50.x, to avoid confusion with other variants.[78] The China-specific variant of Flash will be supported beyond 2020, by a company known as Zhongcheng.[142][143] The Projector (standalone) versions of this variant also work just fine outside of China and do not include the "Flash better Service"; however, some tracking code still seems to be present. BBC News. Retrieved May 20, 2021. Archived from the original on May 28, 2010. Archived from the original on June 4, 2016. "How to really fix the latest Adobe Flash security hole". July 22, 2020. ^ a b Download Macromedia Flash Player 7 for Pocket PC Archived February 7, 2014, at the Wayback Machine. ^ a b Flash Player 7 for Pocket PC - Adobe.com". Archived February 7, 2021. Retrieved January 25, 2021. Sign in to review and manage your activity, including things you've searched for, websites you've visited, and videos you've watched. XML: Flash Player has included native support for XML parsing and generation since version 8. Retrieved January 14, 2021. JSON: Flash Player 11 includes native support for importing and exporting data in the JavaScript Object Notation (JSON) format, which allows interoperability with web services and JavaScript programs. Archived from the original on July 18, 2020. ^ Socket Archived October 11, 2012, at the Wayback Machine, Adobe ActionScript 3 API Reference ^ Sockets Archived October 20, 2012, at the Developer's Guide ^ Developer's Guide / Sockets socket policy file server Archived August 3, 2014, at the Wayback Machine, Adobe ^ ASSQL – MySQL Driver for AS3 Archived May 25, 2013, at the Wayback Machine, Google Code ^ Remi Arnaud (2011). "Flooring the Limits of Adobe Stupidity - whitespace". RTMP supports a non-encrypted version over the Transmission Control Protocol (TCP) or an encrypted version over a secure Transport Layer Security (SSL) connection. June 26, 2018. Retrieved January 23, 2014. ^ AIR 3 Archived August 21, 2014, at the Wayback Machine. Adobe ^ "Help & About Adobe Flash Player – 'End-of-Life'". ^ADOBE® FLASH® PLAYER ENTERPRISE SUPPORT". ISBN 978-1-118-46391-8. Flash Player 11 can also encapsulate within IFByteCode using LLVM Archived May 11, 2012. ^ It can execute software written in the ActionScript programming language which enables the runtime manipulation of text, data, vector graphics, raster graphics, sound, and video. ^ "Flash Projectors after 2020". ^ Adobe Flash 10 to be ARM-optimized in 2009 Archived August 3, 2009, at the Wayback Machine. Archived Adobe Flash Player versions on the original on January 12, 2018, at the Wayback Machine (explains official oil working version check) Retrieved November 7 Packt Publishing Ltd. Codeazur.com.br. ISBN 978-1-56881-437-7. Last version for Windows 95/NT4 and Mac OS/Classic[163] Macromedia Flash Player 6 (version 8.0.22.0, codenamed Marshmallow) (September 13, 2005) Support for runtime loading of GIF and PNG images New video codec (On2 VP6) Improved runtime performance and runtime bitmap caching Live filters and blendmodes File upload and download abilities New text-rendering engine, the Saffron Type System ExternalAPI subclassed in portfolio (including Flash).[194] Macromedia Flash Player 8 (version 8.0.24.0) (April 23, 2006) Adobe Flash Player 9 (version 9.0.15.0, codenamed Zaphod and formerly named Flash Player 8.5) (June 22, 2006) Introduction of ActionScript Virtual Machine 2 (AVM2) with AVM1 retained for compatibility ActionScript 3 (a superset of ECMAScript 3) via AVM2 E4X, which is a new approach to parsing XML Support for Creative Suite 3 March 29, 2012. Retrieved March 9, 2021. ^ Arthur, Charles (June 29, 2012). ^ a Wagner James Au (2012). ^ "Adobe and Google Partnering for Flash Player on Linux". Retrieved September 12, 2009. XML data is held in memory both between the server and the client, and ColdFusion Server. ^ "Security Advisory for Flash Player, Adobe Reader and Acrobat". Archived from the original on September 3, 2009, at the Wayback Machine. Recommends People Uninstall It Now". ^ Pudelek, Jakub (July 25, 2017). ^ "Macromedia Flash Player download center (IRIX". Generator was discontinued in 2002, in favor of new technologies such as Flash Remoting, which allows for seamless transmission of data between the server and the client, and ColdFusion Server. ^ "Security Advisory for Flash Player, Adobe Reader and Acrobat". Retrieved January 26, 2021. Kby.adobe.com. Try it today! Content and code samples on this page are subject to the licenses described in the Content License. ^ a b "Adobe Flash Player Past Blogs.adobe.com. The H. ^ "amines – Project Hosting on Google Code". pp. 37, 40, 42. ^ Integrated Adobe Flash Player Plug-in Archived January 3, 2013, at the Wayback Machine, Chrome team blog ^ Porting Flash to sandboxed PPAPI platform Archived July 25, 2018, at the Wayback Machine, Official Chromium Blog ^ "Flash and Chrome". ^ "Flash Player 8". ^ "Macromedia Announces Availability of Macromedia Flash Player 8". Archived from the original on November 12, 2013. ^ "Gartner – Use of Windows XP. Archived from the original on January 12, 2013. Archived from the original on June 25, 2007. Retrieved November 7, 2007. Archived from the original on November 11, 2014. ZDNet. Newsdee.com. "Adobe to charge Flash users to use 'premium' features". Thoughts on Flash". ^ Lardinois, Frederic. Retrieved May 9, 2010. Two years later it shipped with all releases of Windows XP. Archived from the original on January 12, 2013. Archived from the original on June 25, 2007. Retrieved February 18, 2014. ^After Chrome's move to block Flash, Mozilla Firefox 69 disables Flash by default". Archived from the original on July 31, 2014. It was finally purchased by Adobe Systems after Macromedia in 2005. Microsoft Corporation. There was a certain XML file termed a cross-domain policy,[35] allowing or denying Flash content from one domain to access data in another domain. ^ "Beta News – Flash Player NPAPI for Linux". Archived from the original on SprachenAfrikaanshazarrhaqaukipoobaskaakCatinäCymraegDanskDeutschEnglishEspañolEsperantoEuskaraفارسیFrançaisFryskGaeligeGalegoἙλληνικά한국어HausaHrvatskiIdoIndonesianisiZuluislenskaItalianoKiswahiliLatviešuLietuviųMagyarMelayuNederlandsnorsk bokmålpolskiPortuguêsBrasilPortuguêsqırımtatarcaRomânăSuomiSvenskaTiếng ViệtTürkçeУкраїнська中文भारत The sum of all human knowledge we have access to today is constantly greater than ever before. coming early next year. Retrieved February 15, 2014. All premium features are now classified as general availability, and can be freely used by Flash applications.[183] Apple controversy Main article: Thoughts on Flash In April 2010, Steve Jobs, at the time CEO of Apple Inc. Archived from the original on May 19, 2019. Archived from the original on November 18, 2010. "Migrating Games from Flash to Open Web Standards on Facebook". Jorin.com. Security Boulevard. Retrieved October 15, 2021. ^ a b Flash and the HTML5 tag Archived August 25, 2012, at WebCite, YouTube Blog ^ a b Pardon Our Dust Archived May 31, 2015, at the Wayback Machine, Hulu Blog ^ Future Media Standards & Guidelines – A Addendum v1.5 Archived September 30, 2013, at the Wayback Machine BBC ^ Protocols: HTTP vs. Archived January 7, 2014. Blogs.telegraph.co.uk. Archived November 23, 2013, at the Wayback Machine. ^ However, both if the latest version is installed, and uninstallers may be used to ensure that old-version plugins have been uninstalled from all inbuild browsers. Archived from the original on March 30, 2016. "Adobe Announces Flash Distribution and Updates to End". Of the remaining technologies, Java SE had 84 vulnerabilities, while Adobe Reader had 49 vulnerabilities, Adobe Reader had 49 vulnerabilities, Adobe Reader QuickTime had 27 vulnerabilities. Flash Player was subject to 23 vulnerabilities. Archived from the original on October 2, 2015. January 28, 2014. Archived from the Use of Flash Player in Microsoft's Internet Explorer Web browsers. Retrieved January 26, 2021. Adobe Flash Player 10.3 (version 10.3.181.14, codenamed Wasabi) (May 12, 2011)[201] Media measurement (video analytics for websites; desktop only) Acoustic Echo Cancellation Windows 8, Windows 10.[91] Windows, Linux and macOS Archived from the original on January 19, 2015. Archived from the original on December 16, 2014. ^ a b c d "Internet Archive's Emularity". September 7, 2010. Retrieved July 4, 2012. FLV: Support for decoding and playing back video and audio inside Flash Video (FLV and FAV) files, a format in which both video and audio are encoded. ^ FileReference – Adobe ActionScript® 3 (AS3) API Reference ^ Adobe Flash Player Developer Information Page". In a move to further ensure Adobe Flash security, HTTP requests to traverse firewalls that only allow HTTP traffic. Flash Player will allow content originating from exactly the same website domain to access data saved in local storage.[158] Because local storage can be used to save information on a computer that is later retrieved by the same site, a site can use it to gather user statistics, similar to how HTTP cookies and Web Storage can be used. Retrieved August 10, 2016. This expanded Flash to more than the Flash authoring tool. "Extended Support Release Updated to Flash Player 11.7". Eetimes.com (April 14, 2009). Retrieved November 25, 2012. ^ "12/9/2014 – Release – Flash Player 16". ^ FC64 – Flash Commodore 64 Emulator – Demo — c&deazur brasil lab". Archived from the original on July 26, 2017. Archived from the original on July 1, 2011. 2. p. 2. Retrieved July 1, 2010. the Chrome, Firefox, Internet Explorer, and Safari web browsers, such that no local storage data is saved when the user closes the program and exits their web browser's private mode is in use.[161] Security See also: Adobe Flash § Security Adobe security bulletins and advisories announce security updates, but Adobe Flash Player releases are not described on this browser security issues addressed when a release closes security holes, making it difficult to evaluate the urgency of a particular update. ^ Max, Jose. Retrieved October 3, 2020. V2 Components replaced Flash MX's components, being rewritten from the ground up to take advantage of ActionScript 2.0 and object-oriented principles. Adobe Flash Player 32 (version 32.0.0.453) (August 11, 2020) Adobe Flash Player 32 (version 32.0.0.465) (December 8, 2020) Final global variant update. Retrieved October 29, 2011. Störungen prüfen und Maßnahmen gegen Spam, Betrug oder Missbrauch ergreifen Daten zu Zielgruppeninteraktionen und Websitestatistiken erheben, um zu verstehen, wie unsere Dienste verwendet werden Wenn Sie zustimmen, verwenden wir Cookies und Daten auch für Dienste verbessern und neue Dienste entwickeln Werbung anzeigen und deren Effektivität von Werbung messenPersonalisierte Inhalte anzeigen, abhängig von Ihren EinstellungenPersonalisierte Werbung anzeigen, abhängig von Ihren EinstellungenWenn Sie „Alle ablehnen“ auswählen, verwenden wir Cookies nicht für diese zusätzlichen Zwecke. Adobe Flash Player plug-in was not included in the default installations of most web browsers. Nicht personalisierte Inhalte und Werbung werden u. a. von Inhalten, die Sie sich gerade ansehen, und Ihrem Standort beeinflusst (welche Werbung Sie sehen, basiert auf Ihrem ungefähren Standort). Personalisierte Inhalte und Werbung können auch Video-empfehlungen, eine personalisierte YouTube-Startseite und personalisierte Werbung umfassen, die auf früheren Aktivitäten wie auf diesem Gerät angesehenen YouTube-Videos und Google-Suchanfragen beruhen. website to download it. PNG: Support for decoding and encoding Portable Network Graphics (PNG) images, in both its 24-bit (opaque) and 32-bit (semi-transparent) variants. November 1, 2012. Archived from the original on January 19, 2015. Archived from the original on December 16, 2014. ^ a b c d "Internet Archive's Emularity". September 7, 2010. Retrieved July 4, 2012. FLV: Support for decoding and playing back video and audio inside Flash Video (FLV and FAV) files, a format in which both video and audio are encoded. ^ FileReference – Adobe ActionScript® 3 (AS3) API Reference ^ Adobe Flash Player Developer Information Page". In a move to further ensure Adobe Flash security, HTTP requests to traverse firewalls that only allow HTTP traffic. Firefox have already permanently removed support. adobe.com. Adobe added it to disable existing installations after January 12, 2021.[214] In mid-2020, Flash Player started prompting users to uninstall itself.[126] After Chrome's move to block Flash by default, Firefox has already permanently removed support.[127] However, Flash content remained accessible on the web through emulators such as Ruffle, with varying degrees of compatibility and performance, although this is not endorsed by Adobe. 127.0.0.1. Retrieved January 27, 2021. ^ Gilbertson, Scott (January 28, 2021). Archived from the original on February 3, 2012. ^ "Macromedia – Macromedia Flash Player 9 Update 2 (version 9.0.28.0 release now available for Windows and Macintosh". ^ "Macromedia, Inc: 'Get ready for Flash 4'". ^ a b "Adobe Flash Player download options". ^ "Adobe Flash Player for Windows 98/ME and other platforms[80] Adobe Flash Player 10 (version 10.0.12.36, codenamed Astro) (October 15, 2008) New features 3D object transformations Custom filters via Pixel Bender Advanced text support Speech audio codec Real Time Media Flow Protocol (RTMFP) Dynamic sound generation Vector data type Enhanced features Larger bitmap support Graphics drawing API Context menu Hardware acceleration Anti-aliasing engine (Saffron 3.1) Read/write clipboard access WMODE Adobe Flash Player 10 (version 10.0.32.18) (November 16, 2009) Adobe Flash Player 10 (version 10.0.42.34) (November 24, 2009) Adobe Flash Player 10 (version 10.0.45.2) (February 11, 2010) Adobe Flash Player 10.1 (version 10.1.53.64, codenamed Argo) (June 10, 2010)[200] Reuse of bitmap data copies for better memory management Improved garbage collector Hardware-based H.264 video decoding HTTP Dynamic Streaming Peer-assisted networking and multicast Support for browser privacy modes Multi-touch APIs For Macs/OSX 10.6 or later Using Cocoa UI for Macs Use of Core Animation Adobe Flash Player 10.2 (version 10.2.152.26, codenamed Spicy) (February 8, 2011) Stage Video, a full hardware-accelerated video pipeline Internet Explorer 9 hardware-accelerated rendering support Custom native mouse cursors Multiscreen support Enhanced sub-pixel text rendering (version 10.2.152.32) (February 28, 2011) Adobe Flash Player 10.2 (version 10.2.153.1) (March 21, 2011) Adobe Flash Player 10.2 (version 10.2.159.1) (April 15, 2011) Adobe Flash Player 10.3.181.14, codenamed Wasabi) (May 12, 2011)[201] Media measurement (video analytics for websites; desktop only) Acoustic Echo Cancellation (acoustic echo cancellation, noise suppression, voice activity detection, automatic gain control inside Flash audio chains) Native control panel Auto-update notification for Mac OS X Last version for Mac OS X 10.5[80] and Windows 2000 (unofficially bypassing the XP installer) Adobe Flash Player 10.3 by 11.7 on July 9, 2013.[202] Adobe Flash Player 10.3 (version 10.3.181.23) (June 5, 2011) Adobe Flash Player 10.3 (version 10.3.181.26) (June 29, 2011) Adobe Flash Player 10.3 (version 10.3.181.34) (August 9, 2011) (August 14, 2011) Adobe Flash Player 10.3 (version 10.3.183.7) (August 24, 2011) Adobe Flash Player 10.3 (version 10.3.183.10) (September 21, 2011) Adobe Flash Player 10.3 (version 10.3.183.11) (October 4, 2011) Adobe Flash Player 11 (version 11.0.1.152, codenamed Serrano) (October 4, 2011)[203] 64-bit support for Linux, Mac OS, and Windows (Direct3D 9, OS X (OpenGL, Linux, Android and iOS (OpenGL, ES 2.0) Native Speech-to-Text support Asynchronous bitmap decoding TLS secure sockets Desktop and mobile Stage Video hardware acceleration Native extension libraries[205] Desktop: Windows (.dll), OS X (.framework) Mobile: Android (.jar, .so), iOS (.a) JPEG XR decoding G.711 audio compression for telephony Protected HTTP Dynamic Streaming (HDS) Unlimited bitmap size LZMA SWF compression Mobile only H.264/AAC playback Front-facing camera Background audio playback Device speaker control 16- and 32-bit color Adobe Flash Player 11.1 (version 11.1.102.55, codenamed Anza) (November 10, 2011) Last version of the web browser plug-in for mobile devices, had security extensions for AIR StageText: Native text input UI for Android security enhancements, last official version for mobile devices Adobe Flash Player 11.2 (version 11.2.202.228) (March 28, 2012) Adobe Flash Player 11.2 (version 11.2.202.235, codenamed Brannan) (May 3, 2012)[207] The Windows version offers automatic updater options.[156] Dropped support of the browser plug-in for mobile devices (Android). Archived from the original on April 25, 2015. ^ Flash Player 10.1 Now Available for Windows, Mac, and Linux ^ "Adobe AIR and Adobe Flash Player Team Blog. Retrieved April 25, 2015. Archived from the original on April 5, 2015. ^ Flash Player 11 now Available for Windows Phone ^ "Adobe AIR and Adobe Flash Player Team Blog. Retrieved April 25, 2015. Archived from the original on April 5, 2015. Archived from the original on December 22, 2012. ^ Flash Player 11 now Available for Windows servers that permit Flash content to communicate with them using sockets must host an XML-based cross-domain policy file, served on Port 843.[39] Sockets enable persistent connections, which are a workaround for some limitations. December 28, 2010. Maemo.nokia.com. The Telegraph. ^ Press Room: For immediate release Archived August 31, 2012, at the Wayback Machine. The Verge. ^ a b c d "Flash and Adobe AIR feature list". ^ a c "Adobe abandons Flash for mobile browsers for HTML5 Archived November 14, 2011, at the Wayback Machine. CBS News ^ Adobe abandons mobile Flash development Archived November 14, 2011, at the Wayback Machine, Information World. The Telegraph. ^ Press Room: For immediate release Archived August 31, 2012, at the Wayback Machine. The Verge. ^ a b c d "Flash and Adobe AIR feature list". acceleration. "Adobe rushes out emergency update for critical Flash security flaw". "Flash Player for Android: Adobe with Scout - an article discussing the internals of the Player and the Adobe Scout profiling tool External links Official website Scratch – an interactive learning environment for kids which uses Flash Player 6". June 1, 2012. Archived from the original on September 19, 2014. Retrieved January 26, 2021. November 21, 2021. "3D in a Web Browser". Various open-source component frameworks are available for pure ActionScript projects, such as MadComponents, that provide UI [sizes 1060kb] in both media, developers can access the full Flash Player set of functions, including text, vector graphics, video, camera, microphone, and others. ^ JK-Software's Flash Player Zine Flash Player? [i] March 13, 2012. Starting in 2008, however, this variant was the only publicly supported version of Flash Player ^ Scratch Statistics ^ "Adobe Success Story: LeapFrog Enterprises Archived October 14, 2007, at the Wayback Machine Adobe, enabling the development of the SWF format project, which used the SWF file format and AMF as a means for Flash applications to exchange data with server side applications.[24][25] The SWX system stores data as standard SWF bytecode which is automatically interpreted by Flash Player.[26] Another open-source project, SWXml allows applications to load XML files as native ActionScript objects without any client-side XML parsing, by converting XML files to SWF bytecode on the server.[27][28] Multimedia formats Flash Player is primarily a graphics and multimedia platform, and has supported raster graphics and vector graphics since its earliest version. ^ "Web Storage settings panel". Retrieved September 19, 2010. the exclusive reseller and distributor of Adobe Flash Player". Cimpanu, Catalin (December 9, 2020). In June 2010 Adobe announced a "critical vulnerability" in recent versions, saying there are reports that this vulnerability is being actively exploited in the wild against both Adobe Flash Player, and Adobe Reader and Acrobat.[165] June 2019. ^ "Adobe Flash Player for Android OS Archived April 23, 2011, at the Wayback Machine ^ "Scratch Statistics". ^ "Maemo.nokia.com. The player can also access certain connected hardware devices, including the web camera and microphone, after permission for the same has been granted by the user. TechCrunch. CNET. ^ Adobe Flash Player Archived October 13, 2011, at the Wayback Machine, Android Market ^ Maemo Browser Archived December 29, 2009, at the Wayback Machine. ^ "Adobe Introduces Premium Features for Gaming with Flash Player 11.2." Announces Collaboration with Unity Technologies". May 14, 2014. ^ Macromedia – Flash Player SDK Archived July 18, 2008, at the Wayback Machine. Retrieved July 7, 2013. ^ Macromedia Flash Player SDK Linux.[130][131] Video (H.264) ^ HARMAN International. Archived from the original on May 5, 2012. Archived from the original on February 3, 2008. ^ "CrossBridge for Flash Player Archived September 20, 2017, at the Wayback Machine. GitHub" ^ Remi Arnaud (2011). Retrieved October 15, 2020. ^ Cola, Jake. After 13 years of development and a tortuous demise shortly[90] although in June 2012, Google announced that Android 4.1 (codenamed Jelly Bean) would not support Flash by default.

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