



## INFUZE API CHANGE LOG

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## Version 1.13.6.1 - Mar 17th, 2026

- Added support for
  - Spring 2026 iPhone and iPads

## Version 1.13.6.0 - Feb 17th, 2026

- Added support for
  - emerging custom User-Agents for Android, iOS and other platforms
  - new robots, spiders, content fetchers and crawlers via `is_robot` and `robot_family` capabilities
- Expanded support for
  - User-Agent Client Hints
  - Android based Smart-TV devices
  - SmartTVs, STBs and other OTT devices and platforms
  - app detection via `is_app` and `advertised_app_name`
  - iOS and iPadOS versions and devices
- Dropped support for
  - UcwebU2Matcher (UCWeb U2 proxy Browser) Note: Android User-Agents from this browser will be handled by the AndroidMatcher

## Version 1.13.5.1 - Jan 23, 2026

- New methods (stateless versions, allowing use of values returned also after an updater run):
  - `wurfl_get_last_load_time_buf()`
  - `wurfl_get_last_load_time_as_string_buf()`
  - `wurfl_get_last_updated_buf()`
  - `wurfl_get_wurfl_info_buf()`
- New C++ methods:
  - `loadTimeToString()`
  - `infoToString()`
- New mandatory device IDs enumerator

## Version 1.13.5.0 - Nov 3rd, 2025

- Added support for
  - XiaoMiBrowser on Android, Opera Air on MacOS and CrowBrowser on Linux
  - VegaOS
- Expanded support for
  - Android TV and Fire TV user-agent normalization
  - Generic Android TV detection
  - Android versions and devices
  - iOS and iPadOS versions and devices
  - iOS and iPadOS user agent normalization
  - `robot_family` virtual capability:
    - New "AI Trainer" and "AI Assistant" categories
    - Bytespider and GPTBot User-Agents will now be classified as "AI Trainer"
    - ChatGPT-User User-Agents will now be classified as "AI Assistant"
- Enhanced support for

- tvOS
- Android models
- Fixed behavior for
  - User-Agents and HTTP Requests with invalid or missing Android versions will now return "10.0" as the default/fallback Android version. The previously returned version was "6.0".
- Moved some normalizations from generic normalizer to specific matchers (Android devices)

## Version 1.13.4.2 - Oct 1st, 2025

- Fix
  - iOS and iPadOS versions and devices

## Version 1.13.4.1 - Sept 17th, 2025

- Fix
  - rpm packages now contain digest (required on fedora 43 up)
  - moving to google benchmarks
  - fixed a potential bug in engine instance release
  - increasing default size of devices hashtable (we have more than 110k devices)
  - emerging custom User-Agents for Android, iOS and other platforms

## Version 1.13.4.0 - Jun 10th, 2025

- Added support for
  - emerging custom User-Agents for Android, iOS and other platforms
  - new robots, spiders, content fetchers and crawlers
- Expanded support for
  - User-Agent Client Hints
  - iOS and iPadOS versions and devices
  - SmartTVs, STBs and other OTT devices and platforms
  - app detection via `is_app` and `advertised_app_name`
  - Chromium based browsers and web clients
- Note: VIZIO SmartCast and VizioS User-Agents now return `advertised_*` virtual capability return values consistent with the platform's branding and specification. Notable updates for that platform:
  - `advertised_device_os`: defaults to VIZIO SmartCast
  - `advertised_browser`: defaults to Chromium
- C++ wrapper api vers 1.4 : removed deprecated methods

## Version 1.13.3.1 - May 6th, 2025

- New C++ method `isUAFrozen()` that receives a `std::string` as parameter
- C++ example code for `/usr/share/wurfl/examples`
- Now using PCRE2 regex library

## Version 1.13.3.0 - Feb 18th, 2025

- Added support for
  - `advertised_architecture`: A new virtual capability that returns the architecture of the device based on analysis of the 'Sec-Ch-Ua-Arch' User-Agent Client Hint.

- emerging custom User-Agents for Android, iOS and other platforms
- new robots, spiders and crawlers
- Expanded support for
  - app detection via `is_app` and `advertised_app_name`
  - SmartTVs, STBs and other OTT devices
  - Android versions and devices
  - iOS and iPadOS versions and devices
  - User-Agent Client Hints

### Version 1.13.2.1 - Jan 7, 2025

- Replaced minizip with libzip
- Error messages review
- New C++ Builder methods `setUpdaterLogPath()` and `setUpdaterDataURL()` accepting string as parameter
- New C++ Manager method `lookup()` accepting string as parameter

### Version 1.13.2.0 - Oct 2nd, 2024

- Added support for
  - emerging custom User-Agents for Android, iOS and other platforms
  - new robots, spiders and crawlers
- Expanded support for
  - app detection via `is_app` and `advertised_app_name`
  - SmartTVs, STBs and other OTT devices
  - User-Agent Client Hints
  - iOS and iPadOS versions and devices
- Hard deprecating all the suggested deprecated methods:
  - all old enumerators
- Fixed naming of errors that were out of guidelines (no breaking change, old values still valid)

### Version 1.13.1.1 - Jul 15th, 2024

- New method `wurfl_download()` to get latest `wurfl.zip` from snapshot server
- New Method `const char *wurfl_get_error_string(wurfl_error error_code)` to return error string from error code
- [C++] New `wurflDownload()` method in Manager class
- [C++] New `getStaticCapabilities()` method (replaces method `getCapabilities()`) in Manager class:
- [C++] New `staticCapability()` method (replaces method `capability()`) in Device class:
- [C++] Deprecated methods removed in this version:
  - `virtualCapabilities()`, `deviceIds()`, `capabilities()`, `mandatoryCapabilities()`
- [C++] Newly deprecated methods in class Manager:
  - `setEngineTarget()`, `setUserAgentPriority()`, `engineTarget()`, `engineTargetAsString()`, `useragentPriority()`, `useragentPriorityAsString()`, `getCapabilities()`
- [C++] Newly deprecated methods in class Builder:
  - `setEngineTarget()`, `setUserAgentPriority()`
- [C++] Newly deprecated methods in class Device:

- capability()

## Version 1.13.1.0 - May 28th, 2024

- Added support for
  - emerging custom User-Agents for Android, iOS and other platforms
  - new robots, spiders and crawlers
- Expanded support for
  - app detection via `is_app` and `advertised_app_name`
  - SmartTVs, STBs and other OTT devices
  - iOS and iPadOS versions and devices
  - User-Agent Client Hints

## 1.13.0.1 - Mar 8th, 2024

- removed debug log on stdout

## 1.13.0.0 - Feb 28th, 2024

- Added support for
  - New robots, spiders and crawlers
  - Emerging custom User-Agents for Android, iOS and other platforms
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - User-Agent Client Hints
  - App detection via `is_app` and `advertised_app_name`
  - Digital assistant and connected speaker devices
  - Game Consoles
- Fixed behavior for
  - Spark Email Client (iOS/macOS) now defaults to a desktop detection

## 1.12.11.1 - Nov 23rd, 2023

- Added `wurfl_get_last_updated()` to return xml target
- Fixed some sanitizing issues with gcc 11.4

## 1.12.11.0 - Oct 23rd, 2023

- Added support for
  - new SmartTVs, STBs and other OTT devices
  - new robots, spiders and crawlers
- Expanded support for
  - custom User-Agents for Android, iOS and other platforms
  - User-Agent Client Hints
  - app detection via `is_app` and `advertised_app_name`
  - iOS and iPadOS versions and devices
  - Tizen based devices
- Fixed behavior for
  - Firefox on Android will now use "6.0" as the default/fallback OS version in cases where an Android version is absent

## 1.12.10.2 - Sept 11th, 2023

- Faster Important Headers implementation

## 1.12.10.1 - Jun 29th, 2023

- Fixed incorrect .so versioning in alpine (apk) packages
- C++ API wrapper : binding for wurfl\_device\_get\_parent\_id

## 1.12.10.0 - June 27th, 2023

- Added support for
  - new robots, spiders and crawlers
  - new SmartTVs, STBs and other OTT devices
- Expanded support for
  - custom User-Agents for Android, iOS and other platforms
  - app detection via is\_app and advertised\_app\_name
  - Chromium based browsers and web clients
- Fixed behavior for
  - User-Agents and HTTP Requests with invalid or missing Android versions will now return "6.0" as the default/fallback Android version. The previously returned version was "4.0".
- Note: We periodically update the definition of what we consider to be a smartphone. These changes affect the is\_smartphone and form\_factor capabilities. This version of the WURFL API makes the following change:
  - Minimum OS version requirements increased to iOS 12, Android 8.0

## 1.12.9.0 - March 14th, 2023

- Added support for
  - new robots, spiders and crawlers
  - custom User-Agents for Android, iOS and other platforms
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - User-Agent Client Hints
  - App detection via is\_app and advertised\_app\_name
  - iOS and iPadOS versions and devices
  - Android devices

## 1.12.8.0 - Nov 30, 2022

- Added support for
  - new robots, spiders and crawlers
  - custom User-Agents for Android, iOS and other platforms
- Expanded support for
  - Android devices
  - SmartTVs, STBs and other OTT devices
  - Chromium based browsers and web clients
  - App detection via is\_app and advertised\_app\_name
  - iOS and iPadOS versions and devices

- User-Agent Client Hints

### 1.12.7.0 - Sep 21, 2022

- Added support for
  - new robots, spiders and crawlers
  - new email clients
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - Digital assistant and connected speaker devices
  - Fire OS devices
  - App detection via `is_app` and `advertised_app_name`
  - Mobile and desktop applications
  - iOS and iPadOS versions and devices

### 1.12.6.1 - July 19, 2022

- fixed updater error messages

### 1.12.6.0 - May 31, 2022

- Added support for
  - custom User-Agents for Android, iOS and other platforms
  - new SmartTVs, STBs and other OTT devices
  - device level detection for certain Roku UAs
- Expanded support for
  - User-Agent Client Hints
  - ChromeOS devices
  - `is_smartphone` and `form_factor` capabilities
  - App detection via `is_app` and `advertised_app_name`
  - Chromium based browsers and web clients
  - iOS and iPadOS versions and devices Note: We periodically update the definition of what we consider a Smartphone. These changes affect the `is_smartphone` and `form_factor` capabilities. This version of the WURFL API makes the following changes:
    - Horizontal Resolution requirements increased to 540 pixels
    - Minimum OS version requirements increased to iOS 9, Android 6.0
    - Removed RIM OS and Windows Phone OS from being considered as Smartphone OS'es
    - Added HarmonyOS

### 1.12.5.0 - March 1, 2022

- Added support for
  - new robots, spiders and crawlers
  - custom User-Agents for Android, iOS and other platforms
- Expanded support for
  - User-Agent Client Hints
  - SmartTVs, STBs and other OTT devices
  - App detection via `is_app` and `advertised_app_name`
- Added new API functions:
  - `wurfl_is_ua_frozen()`

- wurfl\_important\_header\_is\_ua\_frozen()
- wurfl\_important\_header\_uach\_quality()
- wurfl\_uach\_quality\_with\_callback() Note: Support for User-Agent Client Hints is now turned on by default.

#### 1.12.4.0 - November 24, 2021

- Added support for
  - new robots, spiders and crawlers
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - Custom User-Agents for Android, iOS and other platforms
  - App detection via is\_app and advertised\_app\_name
  - Certain Windows 11 User-Agents
  - iOS and iPadOS versions and devices
  - KaiOS based devices
  - Tizen based devices

#### 1.12.3.3 - October 28, 2021

- Fixed behavior for
  - ExtraHeadersExperimental

#### 1.12.3.2 - October 21, 2021

- C++ API wrapper : bindings for wurfl\_set\_attr and wurfl\_get\_attr
- macos libwurfl : missing export for wurfl\_get\_attr new method

#### 1.12.3.1 - October 7th, 2021

- Fixed behavior for
  - macOS libwurfl: missing export for wurfl\_set\_attr new method

#### 1.12.3.0 - September 29, 2021

- Added support for
  - new robots, spiders and crawlers
- Expanded support for
  - App detection via is\_app and advertised\_app\_name
  - SmartTVs, STBs and other OTT devices
  - Certain User-Agents from the Roku OS platform
  - iOS and iPadOS versions and devices
- Fixed behavior for
  - Google Read Aloud Assistant: this service is a text to speech assistant and will no longer be categorized as a robot

#### 1.12.2.0 - July 19, 2021

- Added support for
  - Chromium based browsers and web clients
- Expanded support for
  - Android devices

- App detection via `is_app` and `advertised_app_name`
- Certain non-standard app based User-Agents
- SmartTVs, STBs and other OTT devices
- Custom User-Agents for Android, iOS and other platforms

### 1.12.1.0 - May 24, 2021

- Added support for
  - new robots, spiders and crawlers
- Expanded support for
  - SmartTVs, STBs and other OTT devices
- New `wurfl_setattr()` for setting engine attributes

### 1.12.0.0 - February 26, 2021

- Added support for
  - new robots, spiders and crawlers
  - Chromium based browsers and web clients
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - KaiOS based devices
  - App detection via `is_app` and `advertised_app_name`
  - game consoles
  - Firefox based browsers
- Fixed behavior for
  - User-Agents with invalid Android versions will now consistently return the default/fallback Android version (4.0)

### 1.11.10.0 - November 23, 2020

- Added support for
  - Chromium based browsers and web clients
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - App detection via `is_app` and `advertised_app_name`
  - iOS and macOS webviews and apps
  - iOS and iPadOS versions and devices
  - Android TV devices

### 1.11.9.0 - September 14, 2020

- Added support for
  - new robots, spiders and crawlers
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - iOS and macOS webviews and apps
  - App detection via `is_app` and `advertised_app_name`

### 1.11.8.0 - July 1, 2020

- Added support for
  - new robots, spiders and crawlers
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - Android devices
  - iOS versions and devices
  - App detection via `is_app` and `advertised_app_name`

#### 1.11.7.1 - May 4, 2020

- Expanded support for
  - iOS versions and devices

#### 1.11.7.0 - April 30, 2020

- Added support for
  - new digital assistant and connected speaker devices
- Expanded support for
  - UC Browser User-Agents
  - iOS versions and devices
  - App detection via `is_app` and `advertised_app_name`
  - SmartTVs, STBs and other OTT devices
  - Chromium based browsers and web clients
- Speed improvement for `advertised_browser`, `advertised_browser_version`, `advertised_device_os`, `advertised_device_os_version`

#### 1.11.6.0 - February 17, 2020

- Expanded support for
  - App detection via `is_app` and `advertised_app_name`
  - Web browsers
  - new iOS versions and devices
  - SmartTVs, STBs and other OTT devices
- Fixed behavior for
  - Android User-Agents

#### 1.11.5.0 - December 2, 2019

- Added support for
  - new robots, spiders and crawlers
- Expanded support for
  - new iOS versions and devices
  - App detection via `is_app` and `advertised_app_name`
  - Chromium based browsers and web clients
  - SmartTVs, STBs and other OTT devices
  - Fire OS TV devices
- Fixed behavior for
  - UC Browser User-Agents
  - Samsung Browser: Both Dex and Samsung browsers will now return "Samsung"

Browser" for the advertised\_browser\_name virtual capability. This is because both browsers will send a similar HTTP request in desktop mode/requesting a desktop User-Agent.

- Vivaldi: Vivaldi web browser will now return "Vivaldi" and not "Vivaldi browser" for the advertised\_app\_name virtual capability. This is to be consistent with the browser's branding.
- Performance improvement for computing advertised\_browser and advertised\_browser\_version virtual capabilities

## Version 1.11.4.0 - September 16, 2019

- Expanded support for
  - App detection via is\_app and advertised\_app\_name
  - Chromium based browsers and web clients
  - SmartTVs, STBs and other OTT devices
  - KaiOS based devices
  - certain Xiaomi devices

## Version 1.11.3.0 - June 17, 2019

- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - App detection via is\_app and advertised\_app\_name
  - Chromium based browsers
  - Digital Assistant devices
  - new iOS versions and devices
- Fixed behavior for
  - UC Browser User-Agents
  - bot, spider and crawler detection

## Version 1.11.2.0 - April 17, 2019

- Added support for
  - new robots, spiders and crawlers
- Expanded support for
  - SmartTVs, STBs and other OTT devices
  - App detection via is\_app and advertised\_app\_name
  - Google Assistant based devices
  - Chromium based browsers
- Fixed behavior for
  - bot, spider and crawler detection

## Version 1.11.1.0 - February 11, 2019

- Added support for
  - new robots, spiders and crawlers
  - new Chromium and Gecko based browsers

- Expanded support for
  - App generated UAs on Android and iOS platforms
  - App detection via `is_app` and `advertised_app_name`
  - STBs and other OTT devices
  - SmartTVs, STBs and other OTT devices
  - Chromium based browsers
  - Google Assistant based devices
- Fixed behavior for
  - `is_app` and `is_app_webview` behavior under certain conditions where additional HTTP headers are available
  - Android model name extraction for certain User-Agents

### Version 1.11.0.1 - December 6, 2018

- avoid newline in `wurfl_get_last_load_time_as_string()` return string
- fix on `wurfl_get_wurfl_info()` returned string length

### Version 1.11.0.0 - December 5, 2018

- Added support for
  - new Chromium based browsers
  - new virtual capability - `pixel_density`
- Expanded support for
  - app detection via `is_app`, `is_app_webview` and `advertised_app_name`
  - Xbox game consoles
  - web automation frameworks and libraries
  - Internet Explorer and Edge browsers
  - Yahoo Mail
  - robots, crawlers and spiders
  - new Apple devices
  - Gmail

### Version 1.10.0.0 - September 24, 2018

- Potentially breaking change: Please note that this version standardizes tvOS return values for `advertised_device_os` and `advertised_browser` capabilities and aligns them to Apple's branding practices. "TV OS" will henceforth be called "tvOS" and "TV OS App" will be renamed to "tvOS App"
- Added support for
  - new Chromium and Gecko based browsers
- Expanded support for
  - app detection via `is_app` and `advertised_app_name`
  - KaiOS based devices
  - PlayStation devices
  - Apple TV devices

## Version 1.9.5.1 - July 23, 2018

- fixed bug on `wurfl_get_device_with_important_header()` called with empty headers

## Version 1.9.5.0 - July 23, 2018

- Deprecated methods/structs:
  - `wurfl_engine_target`, `wurfl_useragent_priority` and all relative getters and setters. These are now marked for future removal.
- Aligned some return values for the `advertised_device_os` virtual capability to align with `device_os` static capability
  - "Bada" is now "Bada OS"
  - "Nokia Series 40" is now "S40 OS"
  - "Symbian" is now "Symbian OS"
- Added support for
  - Certain Android P User-Agents
  - Certain TV OS User-Agent formats
  - Digital Assistants
  - New Opera browser versions
  - New Tizen versions
  - Upcoming Android and iOS versions
  - New tvOS versions
- Improved support for `is_app` capability for SmartTV devices
- Expanded app detection support via `is_app` and `advertised_app_name`
- Optimized model name extraction for certain Android apps that send irregular User-Agent structures
- Fixed an issue that caused certain Fire OS webview User-Agents to be misclassified within `is_app` and `is_app_webview`

## Version 1.9.4.0

- Added support for
  - Upcoming iOS versions
  - MIUI Browser
  - Quark Browser
  - Avast Secure
- Improved support for
  - Apple iPad (6th gen)
  - Sony and Vizio Smart TVs
  - Roku devices
  - App name detection (`advertised_app_name`)
  - Microsoft Office

- Yandex browser
- Baidu Browser
- Apple Core Media User-Agents
- Facebook Messenger

### Version 1.9.3.1

- Fixed Roku regression
- New Virtual Capabilities:
  - generalized\_browser\_type
  - generalized\_os\_brand

### Version 1.9.3.0

- Potentially breaking change: The definition of what we consider smartphones is changing with this release. Please read this article for more details on what is changing and why - <https://www.scientiamobile.com/keeping-smartphones-smart>
- Added support for
  - KaiOS
  - Tizen 4.0
- Improved detection of
  - Robots and Crawlers
  - Mobile and desktop applications
  - Smart-TVs
  - SmartPhones
  - Game consoles

### Version 1.9.2.0

- Added support for
  - Upcoming iOS versions
  - Upcoming Tizen versions
  - Extracting model numbers for desktop devices under certain conditions
- Improved detection of
  - Opera Mobi and Tablet on Android
  - Requests from UCBrowser's U2 engine

### Version 1.9.1.0

- Breaking: The default version of Android is now 4.0. Undetectable/corrupted Android User-Agents will now return a more appropriate OS version.
- Added support for
  - Upcoming iOS versions
  - Upcoming Android versions
  - Edge browser on iOS and Android
  - Steam in-game requests
  - Firefox Focus

- Yandex Desktop
- Android and iOS UCbrowser User-Agents
- Edge browser
- Improved detection of
  - Fire OS
  - iPhone hardware
  - Apps
  - Huawei devices
  - Firefox on Android User-Agents
- Added additional validation for advertised\_device\_os
- Now using liblru/libfh for LRU cache

## Version 1.9.0.3

- Product codes check added to AMI detection code / pwd-protected WURFL file load

## Version 1.9.0.2

- Added AMI detection code and password-protected WURFL file load

## Version 1.9.0.1

- Fixed multithread cache miss/failed lookup bug
- Optimized Aho-Corasick vs repeated strstr() usage on all platforms

## Version 1.9.0.0

- Decommissioning of engine target options
- Improved detection of
  - Android
  - Bots
  - Apps
  - Amazon Silk Browser
  - CFNetwork User-Agents
- Added support for
  - Epiphany detection
  - iOS 11
  - Samsung Dex
  - Samsung Browser
  - Tizen 3.0
- Added stripping of non-printable characters from the User-Agent

## Version 1.8.4.2

- Fix: handle rare updater error when client sets to ignore SIGCHLD

## Version 1.8.4.1

- Revision and test of C++ API Wrapper

## Version 1.8.4.0

- Added detection of Nintendo Switch
- Added detection of Email client

- Improved detection of devices with encoded user agents
- Fix: Android 4.4/5.x mistakenly classified as apps

### Version 1.8.3.1

- Now using libvcap for vcap computation
- Now using PCRE regex library instead of boost::regex in generic normalization
- Avoiding precomputation of values in device caps/vcaps enumerators

### Version 1.8.3.0

- Added Infuze Updater API
- Added alternative no-callback header-passing API
- Added Edge 15 support
- Added iOS 10.3 support
- Added Android 7.2 and 8.0 support
- Updated detection of Nintendo products
- Updated detection of OsX/macOS

### Version 1.8.2.3

- Added built-in updater and Updater API

### Version 1.8.2.2

- In-depth revision and test of patch load mechanism

### Version 1.8.2.1

- Replaced XML parsing library from libxml2 to expat

### Version 1.8.2.0

- Added support for Edge14
- Updated IE support
- Updated iOS 10 support
- Updated Windows Phone support
- Updated Kindle support
- Updated MSIE support
- Updated IsBot VCap (CUBOT devices)
- Updated Opera and UCWEB U3 IDs
- New Virtual Capability: advertised\_app\_name

### Version 1.8.1.0

- Added support for Amazon Shopping App
- Added support for Android 7.1
- Added iPhone 7 and 7 Plus detection
- Review of Patch File Load Process

### Version 1.8.0.0

- Support for url-encoded UAs
- Better iPod Touch detection
- Better Facebook and Mobile App detection
- Added Chinese Android detection

- Added Android 7 detection
- Mandatory Capabilities are automatically loaded during engine load
- Added iOS 10 detection
- NGINX module : per site conf, white/black lists for injection urls
- lighttpd module : fixed breaking change in 1.4.39

## Version 1.7.1.0

- Added Palemoon Browser
- Added Bravia, SmartTV
- Added iOS 10 and new iOS devices
- Added Desktop App
- IIS Module : no automatic injection of virtual capabilities
- Bugfixing:
  - controlcap mechanism, libwurfl wrong behaviour in multi-threaded mode

## Version 1.7.0.0

- Added WURFL.XML devicelds consistency check
- Added new Virtual Capability: device\_name
- Improved detection of:
  - Apple devices
  - Edge browser

## Version 1.6.4.2

- Fixed rare multithreading race condition on wurfl\_get\_capability()

## Version 1.6.4.1

- Added mandatory capabilities for advertised capabilities

## Version 1.6.4.0

- Improved detection of:
  - Nokia devices
  - Android User-Agents (UAs) without model names
  - Certain feature phones running Opera Mini
  - SmartTVs
  - UAs from Android apps
  - Blackberry Playbook
  - Bot UAs
  - Firefox on iOS
- Improved internal UA matching methods

## Version 1.6.3.0

- Improved detection of Apple devices
- Improved detection of Bots
- Improved detection of Androids
- Improved detection of Edge browser
- Improved virtual capability computation for Safari on iOS
- Improved virtual capability computation for Samsung Browser

- Improved virtual capability computation for BlackBerry 10
- Improved virtual capability computation for Mac OS X
- Improved is\_app\_webview virtual capability computation for Android 5.X
- Improved CFNetwork UAs detection

### Version 1.6.2.2

- Improved detection for iPhones

### Version 1.6.2.1

- Improved detection in VC tool for:
  - MSIE 12/Edge
- Improved detection of:
  - Windows Phone
  - Bots

### Version 1.6.1.0

- Improved detection in VC tool for:
  - Baidu browser
  - iOS
- Improved detection of:
  - iOS
  - FirefoxOS
  - Opera

### Version 1.6.0.2

- Improved detection in VC tool for MSIE 12/Edge
- Improved detection of Windows Phone
- Improved detection of Kindle
- Improved detection of SmartTV
- Added Baidu Browser detection

### Version 1.6.0.0

- Added Android 5.1 support.
- Added MSIE 12/Edge 12.0 support.
- Added Tizen 2.3 support.
- Added Trove Bot detection.
- Added Windows Phone 10 support.
- Added New is\_phone and is\_app\_webview virtual capabilities.
- Improved WURFL detection performances.
- Improved detection of Android, CFNetwork, Chromium, Firefox OS, MSIE 12/Edge, Opera, SmartBrowser, SmartTV, UCWebBrowser, Wii.

### Version 1.5.3.2

- Fixed Windows CE advertised\_browser virtual capability.

### Version 1.5.3.1

- Improved Apple detection.

## Version 1.5.3.0

- Added 360 Browser (for Desktop and Android) detection in VC tool.
- Added Opera on Android detection in VC tool.
- Added Opera on iOS detection in VC tool.
- Added iOS 8.1 and 8.2 WURFL hardware IDs.
- Added Windows 10 detection.
- LD Algorithm Enhancement.
- Added UC browser on Windows Phone support.
- Added wurfl\_has\_capability and wurfl\_has\_virtual\_capability functions to the main WURFL interface.

## Version 1.5.2.1

- Improved detection of:
  - Android
  - Apple
  - Firefox OS
  - Internet Explorer
  - Opera
  - Smart TVs
  - Tizen
  - Ubuntu OS
  - Windows Phone
  - Windows RT
- Improved existing virtual capabilities.
- Added virtual capabilities:
  - complete\_device\_name: The brand\_name, model\_name and marketing\_name (if applicable).
  - form\_factor: Tablet, Smartphone, Feature Phone, Robot, Desktop, Smart-TV, Other Non-Mobile.
- Added support for iOS 8 and iPhone 6 / 6 Plus.
- Added the ability to detect sideloaded browser instead of the device with its stock browser.

## Version 1.5.1.5

- Add: Added new form\_factor virtual capability.

## Version 1.5.1.4

- Fix: Fixed an issue with the XML parser.

## Version 1.5.1.3

- The normalized user agent can now be queried via every module.
- Added WURFL module for Varnish 4.
- Fixed an issue with is\_app virtual capability computation, which prevented returning correct values for Apple iOS devices.

## Version 1.5.1.2

- User agent extraction procedure has been refined.

## Version 1.5.1.1

- Fixed possible bug in virtual capability management.
- Added Zip/GZip support when parsing Wurfl DB, which can now be loaded providing either wurfl.xml or wurfl.zip (containing a valid wurfl.xml as a first entry) or wurfl.xml.gz.

## Version 1.5.1

- Added Thunderbird, Microsoft Outlook and MSOffice matching on desktops.
- Added recognition for three characters locale inside a user agent.
- Apple devices matching logic has been improved.
- Tweaked Android devices model and version recognition, improved Android matching logic.
- Improved Samsung matching logic.
- Improved LG matching logic.
- Improved Windows Phone matching logic.
- Updated Pantech matching logic.
- Updated XBox matching logic.
- Updated Apple devices matching logic.
- Enhanced Virtual Capability computation logic.

## Version 1.5.0

- Added Virtual Capabilities management. A full list of supported Virtual Capabilities can be found [here](#).
- Mandatory capabilities (required to correctly compute the virtual capabilities):
  - device\_os
  - device\_os\_version
  - is\_tablet
  - is\_wireless\_device
  - pointing\_method
  - preferred\_markup
  - resolution\_height
  - resolution\_width
  - ux\_full\_desktop
  - xmlhttp\_support\_level
- Greatly improved memory footprint.
- Improved overall performances.
- Improved Skyfire matching.
- Improved Nintendo matching.
- Fixed many issues when using WURFL in a multi-threaded environment.
- Fixed a locking bug in DoubleLRU Cache.

## Version 1.4.4.1

- Fixed WURFL patch xml parsing phase.

## Version 1.4.4

- Apache Module - Each capability names is uppercased and prefixed with WURFL\_. For example, the capability brand\_name becomes WURFL\_BRAND\_NAME.

- Apache Module - Changed WURFL Environment variables naming:
  - From UserAgent to WURFL\_USERAGENT.
  - From RootId to WURFL\_ROOT\_ID.
  - From Id to WURFL\_ID.
  - From IsDevRoot to WURFL\_ISDEVROOT.
- Added support for new iOS naming in device\_os capability.
- Added Android and Firefox version matching.
- Improved Opera on Android matching.
- Improved XBox user agents matching.
- Fixed Windows RT recovery ID.

### Version 1.4.3.1

- Fixed HTTP header parsing issue.

### Version 1.4.3

- Added support for WindowsRT, Kindle Fire, XBox and Playstation Vita.
- Improved matching of particular Windows Phone, Safari, SmartTV and Maemo User Agents.

### Version 1.4.2.1

- Fixed resource unlock failure in particular conditions.
- Fixed wurfl.xml repository reload failure in non-initialized core conditions.

### Version 1.4.2

- Fixed a rare condition causing C++ API to crash.
- Improved C++ API alignment with Java API codebase.
- System will automatically skip capabilities list if not found in database.
- Added some virtual capabilities (Note: only supported virtual capabilities are is\_smartphone, is\_iphone\_os, is\_android).
- Added Varnish module.
- Added Nginx module.
- Removed old C Interfaces.

### Version 1.4.1.1

- Fixed memory leak issue with glibc.
- New XML reader technique, system loads wurfl.xml file 3x faster.
- Ability to define cache providers (none, lru, double\_lru, etc ...) through C API.
- Ability to define engine mode in between High Performance or High Accuracy through C API.

### Version 1.4.0

- Version number alignment with other WURFL APIs.
- Initial public release.

### Version 1.0.0

- Preliminary alpha release.

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