

AppController v2.0 Documentation

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Note: This documentation may be outdated. For the latest on please visit Confluence page <https://tmobile.atlassian.net/wiki/display/TMOBI/AppController+v2.0>

[Download]

- AppController apk: [AppController.apk](#)
- Control target application:
 - Facebook apk:
 - v5.0.0.26.31: [tempcom.facebook.katana-1_resign.apk](#)
 - v6.0.0.28.28: [tempcom.facebook.katana-1_resign.apk](#)
 - GoogleSearch Chrome apk: [tempcom.android.chrome-1_resign.apk](#)
 - GoogleSearch apk: [tempcom.google.android.googlequicksearchbox-1_resign.apk](#)
 - YouTube apk: [tempcom.google.android.youtube-1_resign2.apk](#)

[Usage]

1. get a Android phone for experiment;
2. prepare the control target apps: uninstall the original control target apps if they exist on the phone, and install the corresponding app apk included in the Download part of this page. For example, if you want to do experiment on Facebook app, you need to uninstall the original Facebook apk on the phone, then install [tempcom.facebook.katana-1_resign.apk](#).
 - a. uninstall app instruction:
 - i. For non-system apps like Facebook, just go to the Application Manager of the device, then find the target app and click on "uninstall" button. Also if you know the package name, you can use "adb uninstall <the target package name>" command in the terminal.
 - ii. For system apps like GoogleSearch,
 1. first go to the Application Manager and find the target app, check if it says "uninstall updates". If so, click on "uninstall updates" untill it says "disable"
 2. go to folder /system/app, locate the target apk by looking at the names, for example GoogleSearch app may be QuickSearchBox.apk

- a. if you find it not easy to locate, please consult the file `/data/system/packages.xml`
3. get root permission by "su", type command "mount -o rw,remount /system"
4. delete the target system apk
5. get root permission, by "su", type command "mount -o ro,remount /system"
6. for some systems you may need to reboot the device to fully remove it
- b. install app instruction: The common way is to connect the device via USB to the computer, then use "adb install <apk to install>" command in the terminal. Some alternatives include: (1) copy the apk to the sdcard of the device, then use "pm install <apk to install>" in the adb shell; (2) send an email with the apk attached, then install the apk by clicking the attachment in the GMail app.
 - i. you may want to add "-r" in the installation command in case that there are some apk with the same name on the device.
3. If the control target app needs some initialization, please initialize it. For example, for Facebook app you need to log in.
4. install [AppController.apk](#).
5. open AppController, choose parameters, and press "Launch Periodically App Control" button. Have fun!
 - a. First execution after the installation may launch the test twice. After that it will be fine.

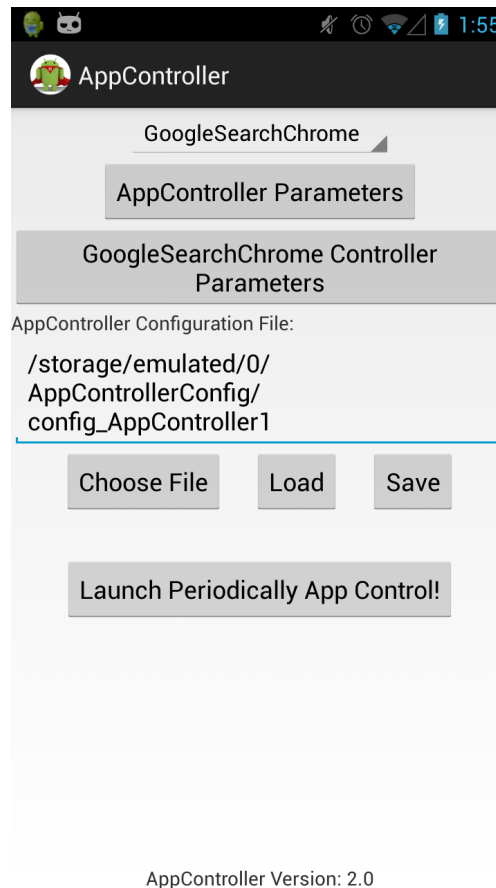
[Configuration File]

- Configuration file folder: `/sdcard/AppControllerConfig`
- Files may be under that folder:
 - [FILE] `config_AppController`
 - App control configuration file with all parameters to set up the experiments. For more information about the parameter setting see the Parameters part of the page.
 - [FILE] `ctrlcode_XXX.apk`
 - The control binary file for each control target app. Currently may be "`ctrlcode_Facebook.apk`", "`ctrlcode_GoogleSearch.apk`", or "`ctrlcode_GoogleSearchChrome.apk`".
 - [FILE] `KeywordList`
 - The keyword list database for GoogleSearch/GoogleSearchChrome experiments.

[Testing Result]

- Result file folder: /sdcard/AppControllerData
- Each experiment is arranged in a folder named by the control target app and the testing time. For example, a folder named "Facebook_20140318_00-33-51" contains the experiment result for Facebook app at 00:33:51 on 03/18/2014.
- Result files under each experiment folder:
 - [FILE] TestStatus
 - The testing log for each sub test cases including the time, test case name, etc.
 - [FILE] TestResult
 - The measurement result, which is control target app specific.
 - [FILE] config_AppController
 - The configuration file for the experiment of this folder.
 - [FILE] logcat_main
 - The main logcat logs for the experiment.
 - [FILE] logcat_event
 - The event logcat logs for the experiment.
 - [FILE] logcat_radio
 - The radio logcat logs for the experiment.
 - [FILE] traffic.cap
 - The tcpdump file the the experiment.
 - [FILE] TestPostTime
 - Parameter specific to Facebook, which logs the uploading time for status, check-in, photo, etc.
 - [FILE] DeviceInfo
 - The device information for the experiment, including the device IP, manufacturer, model, SDK, etc.
 - [FILE] NetworkType
 - The network type for the experiment, for example, WiFi or LTE.
 - [FILE] AppBehaviorLog
 - The controller user input event log with trigger time. This log is designed for cross-layer analysis, and now mainly supported in Facebook experiment.

[User Interface]



[Parameters]

- AppController
 - AppController_controlIdleTime
 - Description: Test case launching period time in second
 - Value: positive integer number, by default is 1200.
 - AppController_appName
 - Description: Test case application name
 - Value: "Facebook", "GoogleSearch", "GoogleSearchChrome", "YouTube"
 - AppController_collectMainLogcat
 - Description: Whether to collect logcat main entry logs
 - Value: 0 for no and 1 for yes. By default is 0.
 - AppController_collectEventLogcat
 - Description: Whether to collect logcat event entry logs
 - Value: 0 for no and 1 for yes. By default is 0.
 - AppController_collectRadioLogcat

- Description: Whether to collect logcat radio entry logs
 - Value: 0 for no and 1 for yes. By default is 0.
- (Hidden in UI) ApplicationController_clickSleepTime
 - Description: Idle time between consecutive click events in msec
 - Value: positive integer number, by default is 1500.
- Facebook
 - Facebook_actionIdleTime
 - Description: Idle time between consecutive Facebook actions in msec
 - Value: positive integer number, by default is 10000.
 - Facebook_updateStatusWaitTime
 - Description: Timeout time for status upload latency measurement in msec
 - Value: positive integer number, by default is 5000.
 - Facebook_uploadPhotoWaitTime
 - Description: Timeout time for photo upload latency measurement in msec
 - Value: positive integer number, by default is 20000.
 - Facebook_checkInWaitTime
 - Description: Timeout time for check-in upload latency measurement in msec
 - Value: positive integer number, by default is 5000.
 - Facebook_AppPullToUpdateWaitTime
 - Description: Test time for passive pull-to-update action in sec
 - Value: positive integer number, by default is 120.
 - Facebook_numberOfPhotoToUpload
 - Description: Number of photo to be uploaded in photo upload action
 - Value: positive integer number, by default is 2.
 - Facebook_randomChoosePhoto
 - Description: Whether randomly select photo in photo upload action
 - Value: 0 for no and 1 for yes. By default is 1.
 - Facebook_actionList
 - Description: List of actions to replay. The number for each action is:
 - 1: Pull to update
 - 2: Update status
 - 3: Checkin
 - 4: 2 photo from camera with location
 - 5: 2 photo from camera without location
 - 6: 2 photo from gallery with location
 - 7: 2 photo from gallery without location
 - 8: Wait for app pull to update
 - Value: sequence of number separated by comma. By default is "5,2,3,6".
 - Facebook_onlyOutputFirstPullToUpdate
 - Description: Whether only output the first pull-to-update latency and don't output the rest
 - Value: 0 for no and 1 for yes. By default is 1.

- GoogleSearch
 - GoogleSearch_interCharacterTime
 - Description: Idle time between consecutive keyword string characters in msec
 - Value: positive integer number, by default is 500.
 - GoogleSearch_keywordListFilename
 - Description: The keyword list file name under /sdcard/AppControllerConfig/
 - Value: file name string, by default is "KeywordList".
 - GoogleSearch_interKeywordTime
 - Description: Idle time between entering consecutive keyword in msec
 - Value: positive integer number, by default is 5000.
 - GoogleSearch_randomChooseKeyword
 - Description: Whether randomly choosing keyword from the list
 - Value: 0 for no and 1 for yes. By default is 0.
 - GoogleSearch_numOfkeywordToEnter
 - Description: The number of keywords to enter from the list
 - Value: positive integer number specifying the number, if putting -1 means entering all keywords on the list. By default it is -1.
- GoogleSearchChrome
 - GoogleSearchChrome_interCharacterTime
 - Description: Idle time between consecutive keyword string characters in msec
 - Value: positive integer number, by default is 500.
 - GoogleSearchChrome_keywordListFilename
 - Description: The keyword list file name under /sdcard/AppControllerConfig/
 - Value: file name string, by default is "KeywordList".
 - GoogleSearchChrome_interKeywordTime
 - Description: Idle time between entering consecutive keyword in msec
 - Value: positive integer number, by default is 5000.
 - GoogleSearchChrome_randomChooseKeyword
 - Description: Whether randomly choosing keyword from the list
 - Value: 0 for no and 1 for yes. By default is 0.
 - GoogleSearchChrome_numOfkeywordToEnter
 - Description: The number of keywords to enter from the list
 - Value: positive integer number specifying the number, if putting -1 means entering all keywords on the list. By default it is -1.
 - GoogleSearchChrome_UrlVisitMode=0
 - Description: Whether entering URLs browsing mode instead of keyword searching. In URL browsing mode a list of URLs specified in keywordListFilename will be entered into URL bar for web browsing

behavior replay. In the file, each line includes 2 values, a URL string and a positive integer to specify the idle time after the URL is fully loaded. For example, an example urlList file:

- www.youtube.com 15000
 - eecs.umich.edu 10000
 - For this urlList file, AppController will control chrome to first visit "www.youtube.com", wait for it to fully load, then wait 15000 msec, then visit "eecs.umich.edu", wait for it to fully load, then wait 10000 msec.
 - Value: 0 for no and 1 for yes. By default is 0.
- YouTube
 - YouTube_interVideoTime
 - Description: The idle time between consecutive video watching on the list in msec
 - Value: positive integer number, by default is 5000.
 - YouTube_randomChooseVideo
 - Description: Whether randomly choosing video from the list
 - Value: 0 for no and 1 for yes. By default is 0.
 - YouTube_numOfvideoToWatch
 - Description: The number of video to watch from the list
 - Value: positive integer number specifying the number, if putting -1 means entering all videos on the list. By default it is -1.
 - YouTube_caseSensitive
 - Description: Whether searching video in a case sensitive manner
 - Value: 0 for no and 1 for yes. By default is 1.
 - YouTube_pullingIdleTime
 - Description: Idle time for pulling UI from the screen to measure loading time in msec
 - Value: positive integer number, by default is 1.
 - YouTube_videoListFilename="videoList"
 - Description: The video list file name under /sdcard/AppControllerConfig/
 - Value: file name string, by default is "videoList".
 - YouTube_whetherSkipAds
 - Description: Whether skip ads
 - Value: 0 for no and 1 for yes. By default is 1.