Yandex Mobile Ads

Integration

10.07.2024

Yandex

Yandex Mobile Ads. Integration. Version 2.0

Document build date: 10.07.2024

This volume is a part of Yandex technical documentation.

Copyright Disclaimer

Contact information

Yandex LLC

https://www.yandex.com

Тел.: +7 495 739 7000

Email: pr@yandex-team.ru

16 L'va Tolstogo St., Moscow, Russia 119021

Contents

Integrating the Mobile Ads SDK

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

Note:

1. To load ads of any type, you need iOS 12.0 or later.
2. To ensure that iOS 14 (or higher) runs correctly, keep in mind the additional steps.

Attention:

The SDK requires enabling the resources located in `YandexMobileAdsBundle.bundle` from `YandexMobileAds.framework`. When you integrate the SDK via CocoaPods, these resources are enabled automatically.

When using a customized `YandexMobileAds.framework` integration, make sure that `YandexMobileAds.bundle` is copied to the project resources.

The library is compatible with the following dependency management systems:

Swift Package Manager

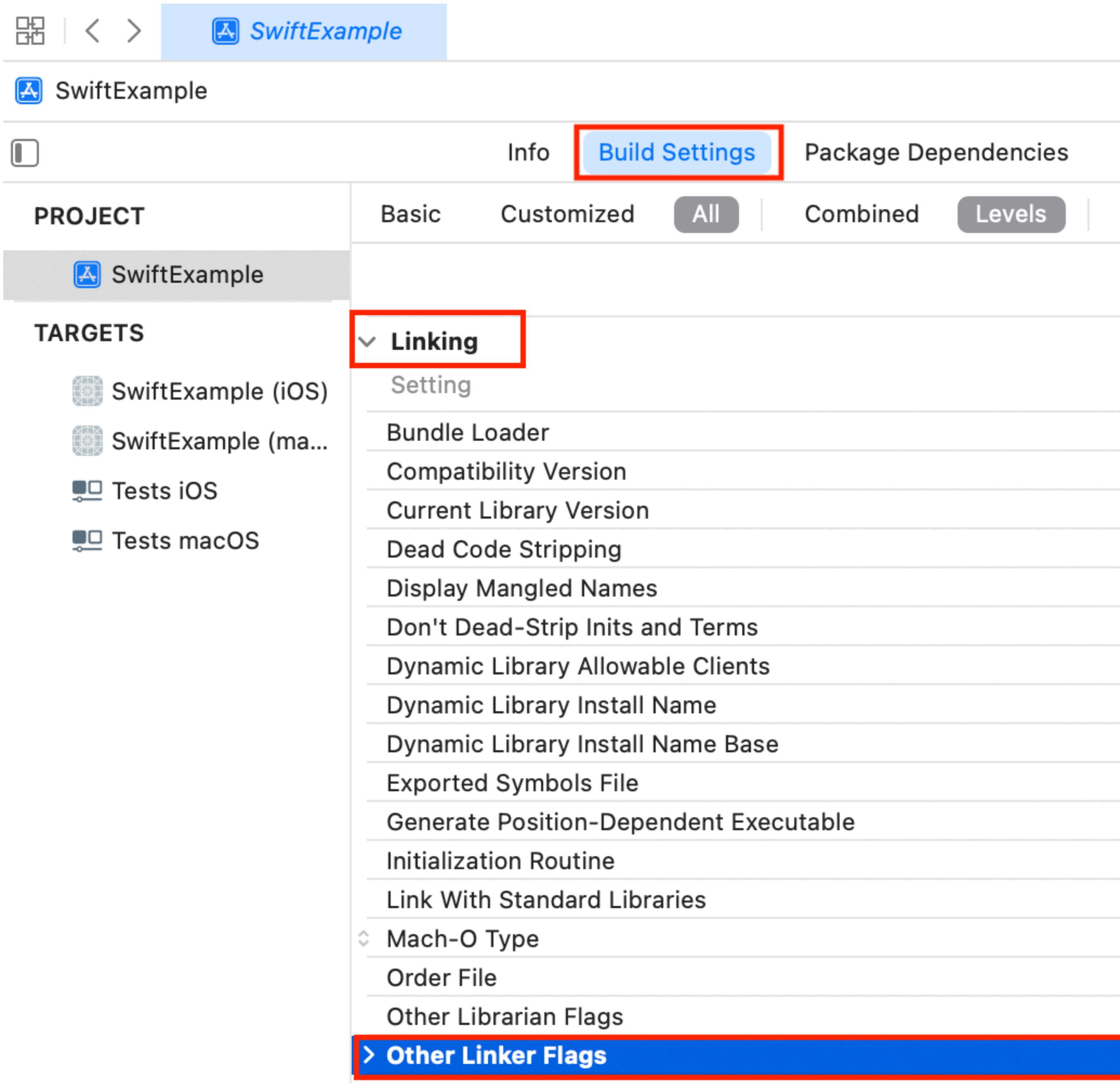
Note:

Mediation adapters aren't supported by the Swift Package Manager integration. If you use mediation, use the integration via CocoaPods.

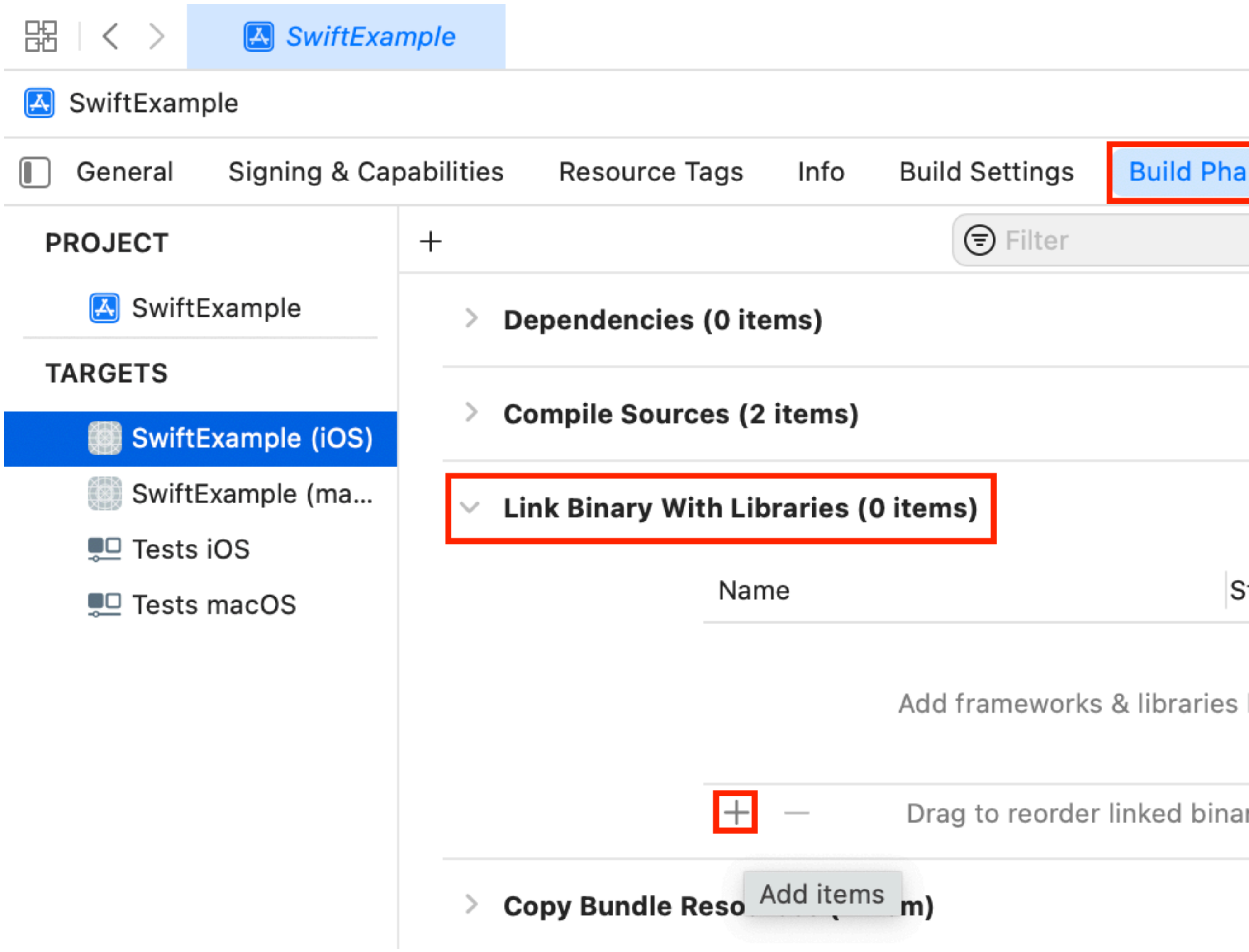
To add the library, follow these steps:

1. In Xcode, add a dependency to your project using **File** → **Add Packages**.
2. Specify the repository URL `https://github.com/yandexmobile/yandex-ads-sdk-swift`: it includes the Swift package.

3. In **Build Settings**, under **Linking**, add the `Other Linker Flags = -ObjC` parameter value.

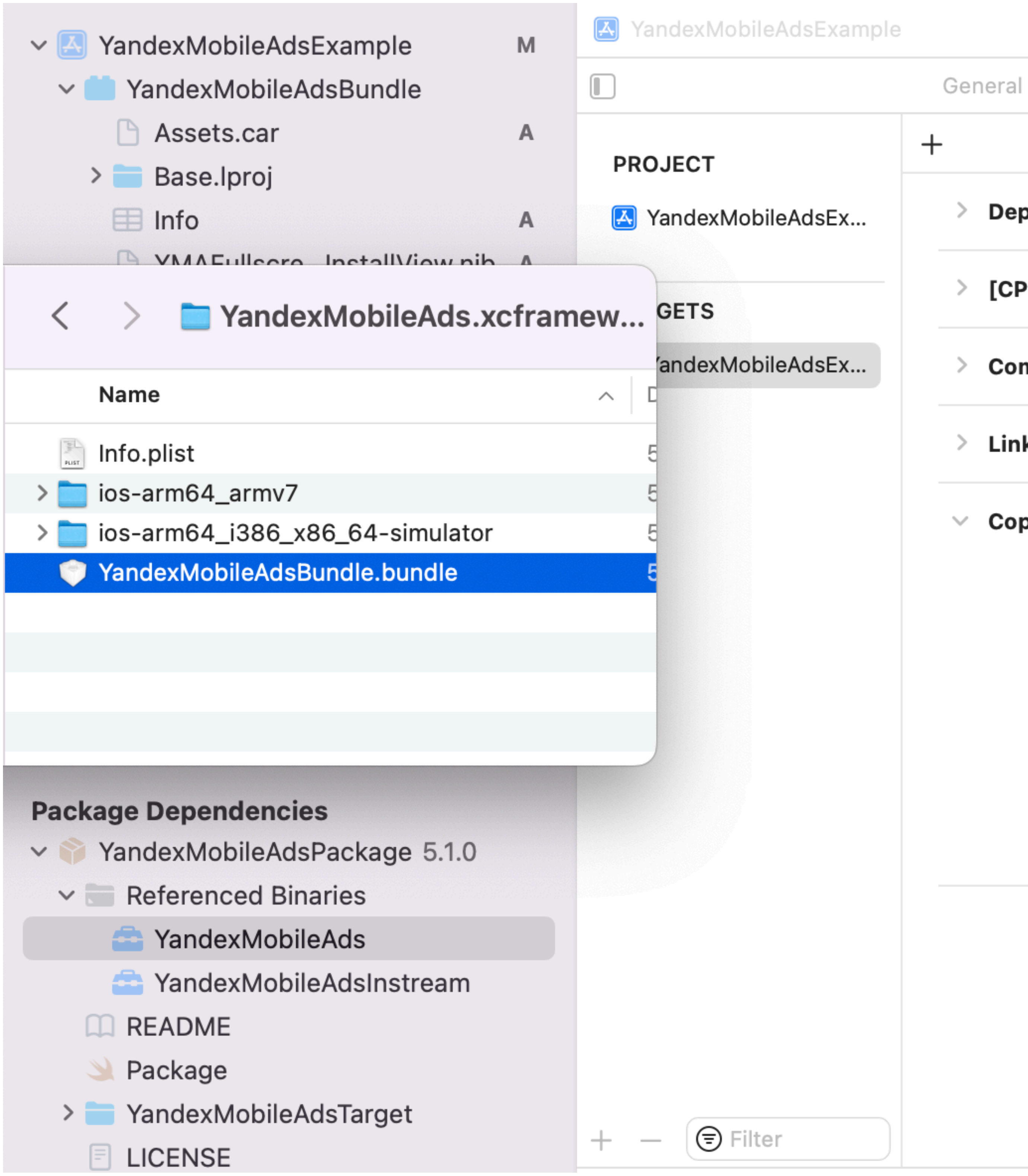


4. Check that the target is linked to YandexMobileAdsPackage. If the target is not linked, add a link to the library under **Link Binary With Libraries** using the **+** icon.



5. Add YandexMobileAdsBundle.bundle from YandexMobileAds (**Package Dependencies** → **YandexMobileAdsPackage** → **Referenced Binaries** → **YandexMobileAds** → **Right click** → **Show in Finder** →

YandexMobileAds.xcframework) to the Copy Bundle Resource phase (**Your target** → **Build Phases** → **Copy Bundle Resource**).



CocoaPods

The Yandex Mobile Ads SDK library has been adapted to work with the CocoaPods dependency management system and supports a static integration method. To connect the library, add the following dependencies to the project's `Podfile` (see the example for a static framework):

```
pod 'YandexMobileAds', '5.9.1'
pod 'YandexMobileAdsInstream', '0.18.0'
```

SKAdNetwork support

Note:

SKAdNetwork is supported for SDK version 4.1.2 and higher.

Mobile Ads SDK supports tracking of app installations using the SKAdNetwork framework. Installation tracking works for any device, even if no access to IDFA was granted.

To enable this functionality, add the Yandex Advertising Network ID to the app's `Info.plist` file.

```
<key>SKAdNetworkItems</key>
<array>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>zq492l623r.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>633vhxswh4.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>tmhh9296z4.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>vcra2ehyfk.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>zh3b7bxvad.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>xmn954pzmp.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>79w64w269u.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>488r3q3dtq.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>d7g9azk84q.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>nzq8sh4pbs.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>866k9ut3g3.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>2q884k2j68.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>x8jxxk4ff5.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>gfat3222tu.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>pd25vrrwzn.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>lr83yxwka7.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>cp8zw746q7.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>pwdxu55a5a.skadnetwork</string>
    </dict>
    <dict>
```

```
            <key>SKAdNetworkIdentifier</key>
            <string>c6k4g5qg8m.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>s39g8k73mm.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>wg4vff78zm.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>g28c52eehv.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>523jb4fst2.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>294l99pt4k.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>3qy4746246.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>a8cz6cu7e5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>ggvn48r87g.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>y755zyxw56.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>qlbq5gtkt8.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>mls7yz5dvl.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>67369282zy.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>899vrgt9g8.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>mj797d8u6f.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>3sh42y64q3.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>f38h382jlk.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>24t9a8vw3c.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>mp6xlyr22a.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>x44k69ngh6.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>88k8774x49.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>hs6bdukanm.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>t3b3f7n3x8.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>prcb7njmu6.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>c7g47wypnu.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>52fl2v3hgk.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>9vvzujtq5s.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>m8dbw4sv7c.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>9g2aggbj52.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>m5mvw97r93.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>z5b3gh5ugf.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>dd3a75yxkv.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>9nlqeag3gk.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>cj5566h2ga.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>h5jmj969g5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>dr774724x4.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>t7ky8fmwkd.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>fz2k2k5tej.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>u679fj5vs4.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>cs644xg564.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>9b89h5y424.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>w28pnjg2k4.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>2rq3zucswp.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>a7xqa6mtl2.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>g2y4y55b64.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>vc83br9sjg.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>cstr6suwn9.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>eqhxz8m8av.skadnetwork</string>
```

```
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>7k3cvf297u.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>w9q455wk68.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>nu4557a4je.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>v4nxqhlyqp.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>wzmmz9fp6w.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>7fmhfwg9en.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>su67r6k2v3.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>yclnxrl5pm.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>7tnzynbdc7.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>l6nv3x923s.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>h8vml93bkz.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>uzqba5354d.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>8qiegk9qfv.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>v79kvwwj4g.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>xx9sdjej2w.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>au67k4efj4.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>t38b2kh725.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>7ug5zh24hu.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>rx5hdcabgc.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>5lm9lj6jb7.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>qqp299437r.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>zmvfpc5aq8.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>9rd848q2bz.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>79pbpufp6p.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>dmv22haz9p.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>y5ghdn5j9k.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>n6fk4nfna4.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>7rz58n8ntl.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>v9wttpbfk9.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>n38lu8286q.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>feyaarzu9v.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>7fbxrn65az.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>47vhws6wlr.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>ejvt5qm6ak.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>b55w3d8y8z.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>v7896pgt74.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>5ghnmfs3dh.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>275upjj5gd.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>627r9wr2y5.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>kbd757ywx3.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>sczv5946wb.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>8w3np9l82g.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>hb56zgv37p.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>9t245vhmpl.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>nrt9jy4kw9.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>7953jerfzd.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>dn942472g5.skadnetwork</string>
    </dict>
    <dict>
```

```
            <key>SKAdNetworkIdentifier</key>
            <string>6v7lgmsu45.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>cad8qz2s3j.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>n9x2a789qt.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>r26jy69rpl.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>eh6m2bh4zr.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>jb7bn6koa5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>fkak3gfpt6.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>a2p9lx4jpn.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>97r2b46745.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>22mmun2rn5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>238da6jt44.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>44jx6755aq.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>b9bk5wbcq9.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>k674qkevps.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>tl55sbb4fm.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>24zw6aqk47.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>4468km3ulz.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>2tdux39lx8.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>2u9pt9hc89.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>8s468mfl3y.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>3cgn6rq224.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>glqzh8vgby.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>av6w8kgt66.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>klf5c3l5u5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>nfqy3847ph.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>dticjx1a9i.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>ppxm28t8ap.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>9wsyqb3ku7.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>74b6s63p6l.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>xy9t38ct57.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>424m5254lk.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>qu637u8glc.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>f73kdq92p3.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>44n7hlldy6.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>kbmxgpxpgc.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>5l3tpt7t6e.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>ecpz2srf59.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>x5854y7y24.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>f7s53z58qe.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>x8uqf25wch.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>uw77j35x4d.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>6964rsfnh4.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>gvmwg8q7h5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>6yxyv74ff7.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>84993kbrcf.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>54nzkqm89y.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>pwa73g5rt2.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>mlmmfzh3r3.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>9yg77x724h.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>n66cz3y3bx.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>578prtvx9j.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>4dzt52r2t5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>bvpn9ufa9b.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>6qx585k4p6.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>mtkv5xtk9e.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>l93v5h6a4m.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>rvh3l7un93.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>gta9lk7p23.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>5tjdwbrq8w.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>r45fhb6rf7.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>32z4fx6l9h.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>e5fvkxwrpn.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>8c4e2ghe7u.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>axh5283zss.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>3rd42ekr43.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>5mv394q32t.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>3qcr597p9d.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>v72qych5uu.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>ydx93a7ass.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>4pfyvq9l8r.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>5a6flpkh64.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>4fzdc2evr5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>4w7y6s5ca2.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>252b5q8x7y.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>2fnua5tdw4.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>3l6bd9hu43.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>4mn522wn87.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>6g9af3uyq4.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>6p4ks3rnbw.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>6xzpu9s2p8.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>737z793b9f.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>89z7zv988g.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>8m87ys6875.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>8r8llnkz5a.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>bxvub5ada5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>c3frkrj4fj.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>cg4yq2srnc.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>dbu4b84rxf.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>dkc879ngq3.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>dzg6xy7pwj.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>gta8lk7p23.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>hdw39hrw9y.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>hjevpa356n.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>krvm3zuq6h.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>ln5gz23vtd.skadnetwork</string>
        </dict>
        <dict>
```

```
            <key>SKAdNetworkIdentifier</key>
            <string>ludvb6z3bs.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>m297p6643m.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>p78axxw29g.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>pu4na253f3.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>s69wq72ugq.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>t6d3zquu66.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>vutu7akeur.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>x2jnk7ly8j.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>x5l83yy675.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>y45688jllp.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>yrqqpx2mcb.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>z4gj7hsk7h.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>wzmmZ9fp6w.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>4pfyvq9L8r.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>V72QYCH5UU.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>2U9PT9HC89.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>3RD42EKR43.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>4FZDC2EVR5.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>7953JERFZD.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>7UG5ZH24HU.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>9RD848Q2BZ.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>9T245VHMPL.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>CJ5566H2GA.skadnetwork</string>
        </dict>
        <dict>
            <key>SKAdNetworkIdentifier</key>
            <string>F38H382JLK.skadnetwork</string>
        </dict>
```

```
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>KLF5C3L5U5.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>M8DBW4SV7C.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>W9Q455WK68.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>WZMMZ9FP6W.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>XY9T38CT57.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>YCLNXRL5PM.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>4PFYVQ9L8R.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>TL55SBB4FM.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>BD757YWX3.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>33r6p7g8nc.skadnetwork</string>
    </dict>
    <dict>
        <key>SKAdNetworkIdentifier</key>
        <string>g69uk9uh2b.skadnetwork</string>
    </dict>
</array>
```

For more information, see Configuring a Source App in the Apple documentation.

See the SDK usage examples.

Ad formats

Banner ads

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

A *banner* is a configurable ad that covers part of the screen and reacts to clicks.

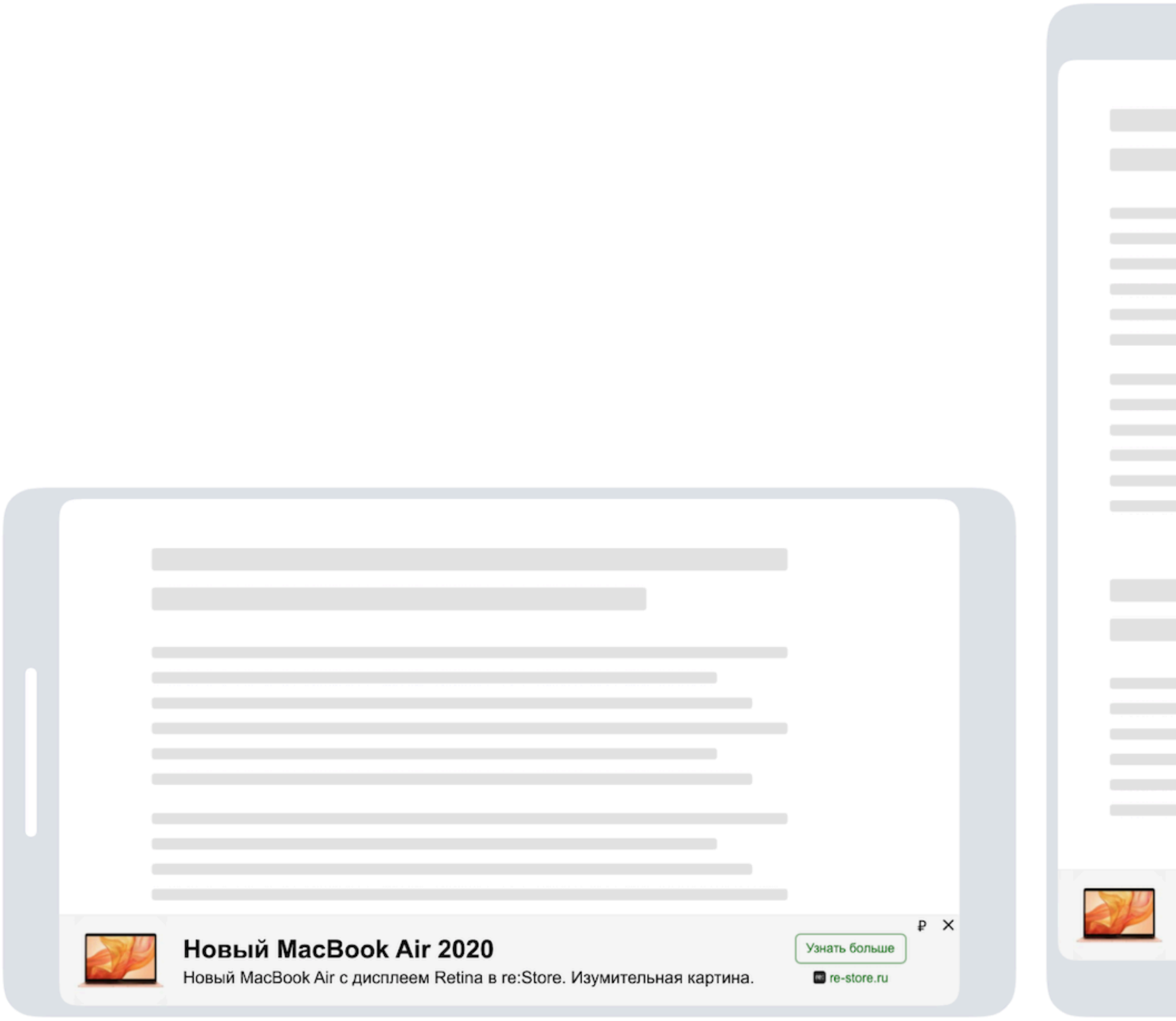
Banner types

Sticky banner

Features:

1. The specified banner width is used. The height is selected automatically.
2. The width of banners is set using the +stickySizeWithContainerWidth: method.
3. The banner height shouldn't exceed 15% of the device height and should be at least 50 dp.

Examples of displaying banners:

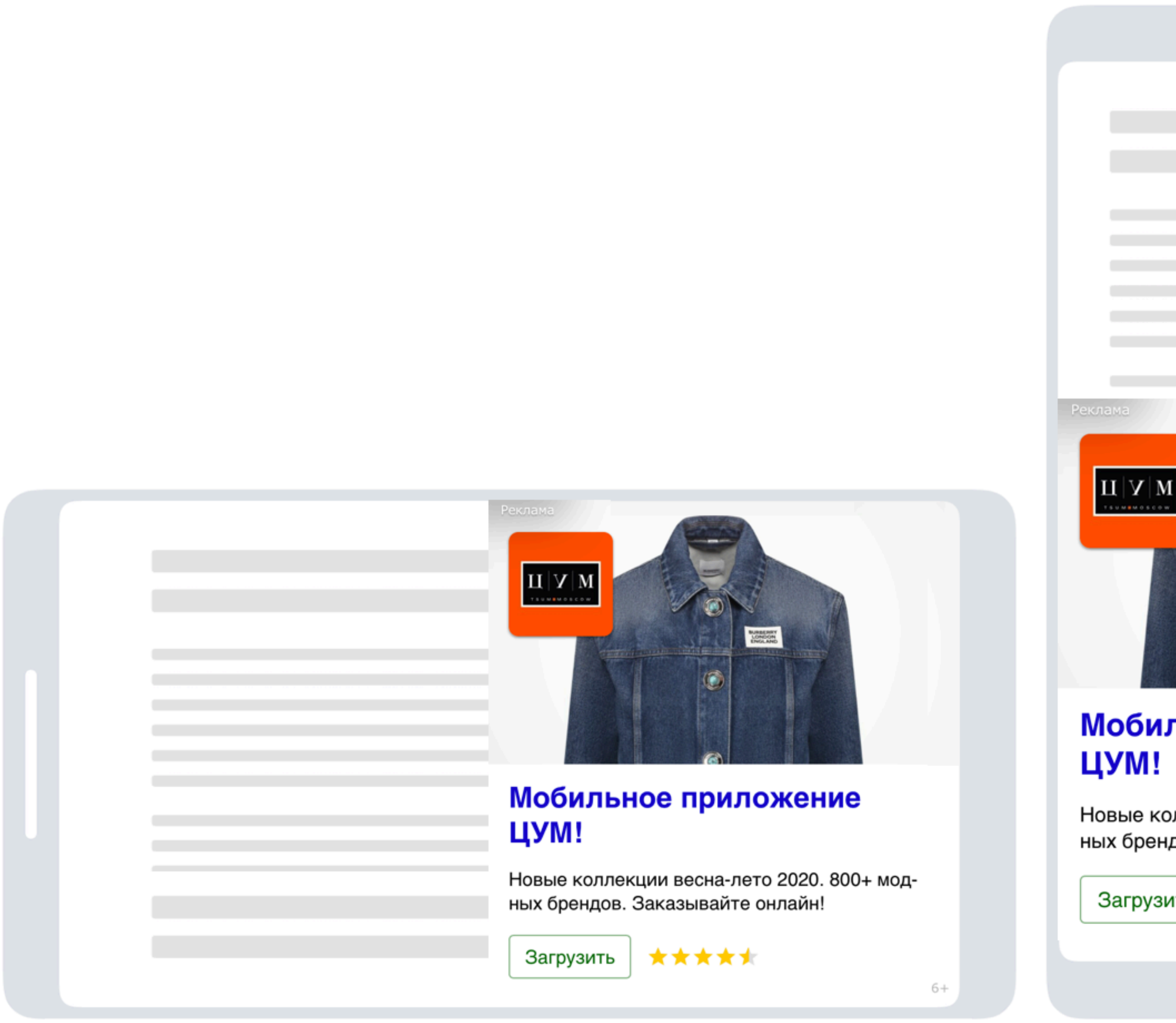

Новый MacBook Air 2020
Новый MacBook Air с дисплеем Retina в re:Store. Изумительная картина.
Узнать больше
re-store.ru

Flex banner

Features:

1. A banner fills up the entire unit using the set maximum sizes.
2. The width and height of banners is set using the +flexibleSizeWithCGSize: method.
3. The SDK imposes `NSLayoutConstraint` on the banner height.

Examples of displaying banners:


Реклама
Мобильное приложение ЦУМ!
Новые коллекции весна-лето 2020. 800+ модных брендов. Заказывайте онлайн!
Загрузить
6+

Enabling a banner

To enable the banner:

1. Add the import:

Swift

```
import YandexMobileAds
```

Objective-C

```
#import <YandexMobileAds/YandexMobileAds.h>
```

2. Create @property, where the link to the banner ad will be stored:

   Swift

   ```
   var adView: YMAAdView!
   ```

   Objective-C

   ```
   @property (nonatomic, strong) YMAAdView *adView;
   ```

3. Create a banner:

   Sticky banner

   To set the width of a banner, call the +stickySizeWithContainerWidth: method.

   Swift

   ```
   let adSize = YMAAdSize.stickySize(withContainerWidth: width)
   let adView = YMAAdView(adUnitID: "", adSize: adSize)
   adView.delegate = self
   ```

   Objective-C

   ```
   YMAAdSize adSize = [YMAAdSize stickySizeWithContainerWidth:width];
   YMAAdView *adView = [[YMAAdView alloc] initWithAdUnitID:<AdUnitID> adSize:adSize];
   adView.delegate = self;
   ```

   Flex banner

   To set the width and height of a banner, call the +flexibleSizeWithCGSize: method.

   Swift

   ```
   let adSize = YMAAdSize.flexibleSize(with: size)
   let adView = YMAAdView(adUnitID: "", adSize: adSize)
   adView.delegate = self
   ```

   Objective-C

   ```
   YMAAdSize adSize = [YMAAdSize flexibleSizeWithCGSize:size];
   YMAAdView *adView = [[YMAAdView alloc] initWithAdUnitID:<AdUnitID> adSize:adSize];
   adView.delegate = self;
   ```

   Restriction: Banner size requirements when displaying video ads

   Minimum size of a banner that supports video playback is 300x160 or 160x300.

   `AdUnitId` is a unique identifier in R-M-XXXXXX-Y format, which is assigned in the Partner Interface.

   In addition, `self` must conform to the YMAAdViewDelegate protocol. If the delegate implements the -viewControllerForPresentingModalView method, links open in the in-app browser. Otherwise, links open in the browser installed on the device.

   To find out why ads aren't working correctly, use the -adViewDidFailLoading:error: method.

   For error descriptions, see YMAAdErrorCode.

4. Display a banner. There are two ways to place a banner:

   - Using `autolayout constraints`.

     Add the banner to `UIView`. Then add `autolayout constraints` so the banner is displayed in the desired location.

     Swift

     ```
     view.addSubview(adView)
     adView.translatesAutoresizingMaskIntoConstraints = false
     var adViewConstraints = [
         adView.leadingAnchor.constraint(equalTo: adView.superview!.leadingAnchor),
         adView.trailingAnchor.constraint(equalTo: adView.superview!.trailingAnchor)
     ]
     let bottomDistance: CGFloat = 8
     if #available(iOS 11.0, *) {
         adViewConstraints.append(
             adView.bottomAnchor.constraint(equalTo: view.safeAreaLayoutGuide.bottomAnchor, constant:
      bottomDistance)
         )
     } else {
         adViewConstraints.append(
     ```

```
        adView.bottomAnchor.constraint(equalTo: view.bottomAnchor, constant: bottomDistance)
    )
}
NSLayoutConstraint.activate(adViewConstraints)
```

Objective-C

```
UIView *adView = self.adView;
[self.view addSubview:adView];
adView.translatesAutoresizingMaskIntoConstraints = NO;

NSMutableArray *adViewConstraints = [NSMutableArray arrayWithArray:@[
    [adView.leadingAnchor constraintEqualToAnchor:adView.superview.leadingAnchor],
    [adView.trailingAnchor constraintEqualToAnchor:adView.superview.trailingAnchor]
]];
int bottomDistance = 8;
if (@available(iOS 11.0, *)) {
    UILayoutGuide *guide = self.view.safeAreaLayoutGuide;
    [adViewConstraints addObject:[adView.bottomAnchor constraintEqualToAnchor:guide.bottomAnchor
                                                                     constant:bottomDistance]];
} else {
    [adViewConstraints addObject:[adView.bottomAnchor
 constraintEqualToAnchor:adView.superview.bottomAnchor
                                                                     constant:bottomDistance]];
}
[NSLayoutConstraint activateConstraints:adViewConstraints];
```

- Using the following methods:

  Swift

  ```
  displayAtTop(in:)
  displayAtBottom(in:)
  ```

  Objective-C

  ```
  -displayAtTopInView:;
  -displayAtBottomInView:;
  ```

  In both cases, banners are centered horizontally.

5. Load the banner using the -loadAdWithRequest: method.

   Use the YMAAdRequest class to transmit the code received in the Adfox interface (for more information, see Help for Adfox).

   Swift

```
// Code from the Adfox interface for working with direct campaigns.
var parameters = [String: String]()
parameters["adf_ownerid"] = "<example>"
parameters["adf_p1"] = "<example>"
parameters["adf_p2"] = "<example>"
parameters["adf_pfc"] = "<example>"
parameters["adf_pfb"] = "<example>"
parameters["adf_pt"] = "<example>"
parameters["adf_pd"] = "<example>"
parameters["adf_pw"] = "<example>"
parameters["adf_pv"] = "<example>"
parameters["adf_prr"] = "<example>"
parameters["adf_pdw"] = "<example>"
parameters["adf_pdh"] = "<example>"
let request = YMAMutableAdRequest()
request.age = age
request.contextQuery = contextQuery
request.contextTags = contextTags
request.gender = gender
request.location = location
request.parameters = parameters
adView.loadAd(with: adRequest)
```

   Objective-C

```
// Code from the Adfox interface for working with direct campaigns.
NSMutableDictionary *parameters = [[NSMutableDictionary alloc] init];
parameters[@"adf_ownerid"] = @"<example>";
parameters[@"adf_p1"] = @"<example>";
parameters[@"adf_p2"] = @"<example>";
parameters[@"adf_pfc"] = @"<example>";
parameters[@"adf_pfb"] = @"<example>";
parameters[@"adf_pt"] = @"<example>";
parameters[@"adf_pd"] = @"<example>";
parameters[@"adf_pw"] = @"<example>";
parameters[@"adf_pv"] = @"<example>";
parameters[@"adf_prr"] = @"<example>";
parameters[@"adf_pdw"] = @"<example>";
parameters[@"adf_pdh"] = @"<example>";
```

```
YMAMutableAdRequest *request = [[YMAMutableAdRequest alloc] init];
request.age = age;
request.contextQuery = contextQuery;
request.contextTags = contextTags;
request.gender = gender;
request.location = location;
request.parameters = parameters;
[self.adView loadAdWithRequest:adRequest];
```

6. You can optionally enable logging by using the +enableLogging method. If an impression wasn't registered, a message appears in the console.
7. Optionally, you can set up notifications about the end of video playback in banner ads.

Usage example

Swift

```
// Getting an instance of YMAVideoController using VideoController.
let videoController = adView.videoController

// Setting up a delegate that implements the YMAVideoDelegate protocol.
videoController.delegate = self

// Implementing the YMAVideoDelegate protocol method.
// MARK: - YMAVideoDelegate
func videoControllerDidFinishPlayingVideo(_ videoController: YMAVideoController) {
    print("Video complete");
}
```

Objective-C

```
// Getting an instance of YMAVideoController using videoController.
YMAVideoController *videoController = self.adView.videoController;

// Setting up a delegate that implements the YMAVideoDelegate method.
videoController.delegate = self;

// Implementing the YMAVideoDelegate protocol method.
#pragma mark - YMAVideoDelegate
- (void)videoControllerDidFinishPlayingVideo:(YMAVideoController *)videoController
{
    NSLog(@"%@", @"Video complete");
}
```

See also

Classes and protocols for working with banner ads

Tracking ad activity

Related information

Ad example

Interstitial ads

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

An interstitial ad is a configurable ad that covers the entire screen and responds to clicks.

To enable advertising:

1. Add the import:

Swift

```
import YandexMobileAds
```

Objective-C

```
#import <YandexMobileAds/YandexMobileAds.h>
```

2. Create `@property` where the link to the banner ad will be stored:

   Swift

   ```
   var interstitialAd: YMAInterstitialAd!
   ```

   Objective-C

   ```
   @property (nonatomic, strong) YMAInterstitialAd *interstitialAd;
   ```

3. Perform ad initialization and pre-loading using the -loadWithRequest: method.

   Use the YMAAdRequest class to transmit the code received in the Adfox interface (for more information, see Help for Adfox).

   Swift

   ```
   // Code from the Adfox interface for working with direct campaigns.
   var parameters = [String: String]()
   parameters["adf_ownerid"] = "<example>"
   parameters["adf_p1"] = "<example>"
   parameters["adf_p2"] = "<example>"
   parameters["adf_pfc"] = "<example>"
   parameters["adf_pfb"] = "<example>"
   parameters["adf_pt"] = "<example>"
   parameters["adf_pd"] = "<example>"
   parameters["adf_pw"] = "<example>"
   parameters["adf_pv"] = "<example>"
   parameters["adf_prr"] = "<example>"
   parameters["adf_pdw"] = "<example>"
   parameters["adf_pdh"] = "<example>"
   let request = YMAMutableAdRequest()
   request.age = age
   request.contextQuery = contextQuery
   request.contextTags = contextTags
   request.gender = gender
   request.location = location
   request.parameters = parameters
   interstitialAd = YMAInterstitialAd(adUnitID: "<AdUnitID>")
   interstitialAd.delegate = self
   interstitial.loadAd(with: request)
   ```

   Objective-C

   ```
   // Code from the Adfox interface for working with direct campaigns.
   NSMutableDictionary *parameters = [[NSMutableDictionary alloc] init];
   parameters[@"adf_ownerid"] = @"<example>";
   parameters[@"adf_p1"] = @"<example>";
   parameters[@"adf_p2"] = @"<example>";
   parameters[@"adf_pfc"] = @"<example>";
   parameters[@"adf_pfb"] = @"<example>";
   parameters[@"adf_pt"] = @"<example>";
   parameters[@"adf_pd"] = @"<example>";
   parameters[@"adf_pw"] = @"<example>";
   parameters[@"adf_pv"] = @"<example>";
   parameters[@"adf_prr"] = @"<example>";
   parameters[@"adf_pdw"] = @"<example>";
   parameters[@"adf_pdh"] = @"<example>";
   YMAMutableAdRequest *request = [[YMAMutableAdRequest alloc] init];
   request.age = age;
   request.contextQuery = contextQuery;
   request.contextTags = contextTags;
   request.gender = gender;
   request.location = location;
   request.parameters = parameters;
   self.interstitialAd = [[YMAInterstitialAd alloc] initWithAdUnitID:<your unique AdUnitID>];
   self.interstitialAd.delegate = self;
   [self.interstitialAd loadAdWithRequest:request];
   ```

4. Start displaying ads by using this method:

   Swift

   ```
   func interstitialAdDidLoad(_ interstitialAd: YMAInterstitialAd) {
       interstitialAd.present(from: self)
   }
   ```

   Objective-C

   ```
   - (void)interstitialAdDidLoad:(YMAInterstitialAd *)interstitialAd
   {
       [interstitialAd presentFromViewController:self];
   }
   ```

5. You can optionally enable logging by using the +enableLogging method. If an impression wasn't registered, a message appears in the console.

To find out why ads aren't working correctly, use the methods

Swift

```
func interstitialAdDidFail(toLoad interstitialAd: YMAInterstitialAd, error: Error)
func interstitialAdDidFail(toPresent interstitialAd: YMAInterstitialAd, error: Error)
```

Objective-C

```
- (void)interstitialAdDidFailToLoad:(YMAInterstitialAd *)interstitialAd error:(NSError *)error;
- (void)interstitialAdDidFailToPresent:(YMAInterstitialAd *)interstitialAd error:(NSError *)error;
```

For error descriptions, see YMAAdErrorCode.

To see how the ad will be displayed in the app, use a demo `AdUnitId`:

- `demo-interstitial-yandex`

See also

Classes and protocols for working with interstitial ads

Tracking ad activity

Related information

Ad example

Enabling rewarded ads

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

A *rewarded ad* is a configurable full-screen ad. The user gets a reward for viewing the ad.

To enable advertising:

1. Add the import:

   Swift

   ```
   import YandexMobileAds
   ```

   Objective-C

   ```
   #import <YandexMobileAds/YandexMobileAds.h>
   ```

2. Create `@property` for storing the link to the ad:

   Swift

   ```
   var rewardedAd: YMARewardedAd!
   ```

   Objective-C

   ```
   @property (nonatomic, strong) YMARewardedAd *rewardedAd;
   ```

3. Initialize the ad:

   Swift

   ```
   rewardedAd = YMARewardedAd(adUnitID: “<AdUnitID>”)
   rewardedAd.delegate = self
   ```

   Objective-C

   ```
   self.rewardedAd = [[YMARewardedAd alloc] initWithAdUnitID:<your unique AdUnitID>];
   ```

```
self.rewardedAd.delegate = self;
```

`AdUnitId` is a unique identifier in R-M-XXXXXX-Y format, which is assigned in the Partner Interface.

In addition, `self` must conform to the YMARewardedAdDelegate protocol.

4. Load an ad.

Swift

```
rewardedAd.load()
```

Objective-C

```
[self.rewardedAd load];
```

Optionally, you can use the YMAAdRequest class to transmit the data for targeting. For an example of using the class, see Interstitial ads.

The ad must be pre-loaded in the same orientation as it will be shown (otherwise, the ad will not be shown because the banner size won't match the screen size).

5. Start displaying ads by using this method:

Swift

```
func rewardedAdDidLoad(_ rewardedAd: YMARewardedAd) {
    rewardedAd.present(from: self)
}
```

Objective-C

```
- (void)rewardedAdDidLoad:(YMARewardedAd *)rewardedAd
{
    [rewardedAd presentFromViewController:self];
}
```

6. If you are using the “client-side reward” mechanism, implement the - rewardedAd:didReward: delegate method. It is called when the impression is registered and the user can be rewarded for viewing the ad. Use this chance to give the reward to the app user.
7. You can optionally enable logging by using the +enableLogging method. If an impression wasn't registered, a message appears in the console.

To find out why ads aren't working correctly, use the methods

Swift

```
func rewardedAdDidFail(toLoad rewardedAd: YMARewardedAd, error: Error)
func rewardedAdDidFail(toPresent rewardedAd: YMARewardedAd, error: Error)
```

Objective-C

```
- (void)rewardedAdDidFailToLoad:(YMARewardedAd *)rewardedAd error:(NSError *)error;
- (void)rewardedAdDidFailToPresent:(YMARewardedAd *)rewardedAd error:(NSError *)error;
```

For error descriptions, see YMAAdErrorCode.

To see how the ad will be displayed in the app, use a demo `AdUnitId`:

- `demo-rewarded-yandex`

See also

Classes and protocols for working with rewarded video ads

Native ads

Enabling native ads

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

Yandex Mobile Ads SDK lets you render ads using your own visual assets.

Native ads can adapt to the features and design of the app they are displayed in. The layout of a native ad matches the environment it is integrated into. This type of ad looks natural and contributes useful information to the app.

The SDK also provides a set of ready-made customizable visual assets (templates) that let you enjoy all the benefits of rendering from the platform's native tools without creating your own design.

The Yandex Mobile Ads SDK supports several types of advertising: App Install, Content, Image.

To enable advertising:

1. Read the advertising requirements.
2. Load an ad.
3. Configure the ad's design.

See also

Classes and protocols for working with native ads

Tracking ad activity

Related information

YMANativeErrorCode

Ad example

Loading ads

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

Loading ads

1. Create an instance of the YMANativeAdLoader class to get native ads.
2. Create a configuration for the `nativeAdRequestConfiguration` request using the YMANativeAdRequestConfiguration class. As the request parameters, you can use the ad unit ID, method for loading images, age, gender characteristics, and other data that might improve the quality of ad selection.
3. Set a delegate for retrieving an ad that implements the YMANativeAdLoaderDelegate protocol:
4. To track the ad loading process, implement the YMANativeAdLoaderDelegate protocol methods: -nativeAdLoader:didFailLoadingWithError: and -nativeAdLoader:didLoadAd:.
5. To load the ad, send the `loadAdWithRequestConfiguration:` message to the loader.

   Use the YMAMutableNativeAdRequestConfiguration class to transmit the code received in the Adfox interface (for more information, see Help for Adfox).

   Swift

```
// Code from the Adfox interface for working with direct campaigns.
var parameters = [String: String]()
parameters["adf_ownerid"] = "<example>"
parameters["adf_p1"] = "<example>"
parameters["adf_p2"] = "<example>"
parameters["adf_pfc"] = "<example>"
parameters["adf_pfb"] = "<example>"
parameters["adf_pt"] = "<example>"
parameters["adf_pd"] = "<example>"
parameters["adf_pw"] = "<example>"
parameters["adf_pv"] = "<example>"
parameters["adf_prr"] = "<example>"
parameters["adf_pdw"] = "<example>"
parameters["adf_pdh"] = "<example>"
let requestConfiguration = YMAMutableNativeAdRequestConfiguration(adUnitID: "R-M-XXXXXX")
requestConfiguration.age = age
requestConfiguration.contextQuery = contextQuery
requestConfiguration.contextTags = contextTags
requestConfiguration.gender = gender
requestConfiguration.location = location
requestConfiguration.parameters = parameters
```

```
adLoader.loadAd(with: requestConfiguration)
```

Objective-C

```
// Code from the Adfox interface for working with direct campaigns.
NSMutableDictionary *parameters = [[NSMutableDictionary alloc] init];
parameters[@"adf_ownerid"] = @"<example>";
parameters[@"adf_p1"] = @"<example>";
parameters[@"adf_p2"] = @"<example>";
parameters[@"adf_pfc"] = @"<example>";
parameters[@"adf_pfb"] = @"<example>";
parameters[@"adf_pt"] = @"<example>";
parameters[@"adf_pd"] = @"<example>";
parameters[@"adf_pw"] = @"<example>";
parameters[@"adf_pv"] = @"<example>";
parameters[@"adf_prr"] = @"<example>";
parameters[@"adf_pdw"] = @"<example>";
parameters[@"adf_pdh"] = @"<example>";
YMAMutableNativeAdRequestConfiguration *requestConfiguration =
        [[YMAMutableNativeAdRequestConfiguration alloc] initWithAdUnitID:@"R-M-XXXXXX"];
requestConfiguration.age = age;
requestConfiguration.contextQuery = contextQuery;
requestConfiguration.contextTags = contextTags;
requestConfiguration.gender = gender;
requestConfiguration.location = location;
requestConfiguration.parameters = parameters;

[adLoader loadAdWithRequestConfiguration:requestConfiguration];
```

6. If the ad loaded, the following method is called:

   Swift

   ```
   func nativeAdLoader(_ loader: YMANativeAdLoader, didLoad ad: YMANativeAd)
   ```

   Objective-C

   ```
   - (void)nativeAdLoader:(YMANativeAdLoader *)loader didLoadAd:(id<YMANativeAd>)ad
   ```

7. If the ad didn't load, the following method is called:

   Swift

   ```
   func nativeAdLoader(_ loader: YMANativeAdLoader, didFailLoadingWithError error: Error)
   ```

   Objective-C

   ```
   - (void)nativeAdLoader:(YMANativeAdLoader *)loader didFailLoadingWithError:(NSError *)error
   ```

   For more information about possible errors, see YMANativeErrorCode.

8. Optionally, you can use the `(nonatomic, copy, readonly) NSString *info` property of the YMANativeAd protocol to get the string that was set in the **Additional text** box in the Adfox interface.

Examples with a demo AdUnitId

To see how the ad will be displayed in the app, use a demo AdUnitId:

- For an App Install type of ad: demo-native-app-yandex.
- For a Content type of ad: demo-native-content-yandex.
- For an Image type of ad: R-M-187883-1. You also need to pass a list of parameters:

  Swift

  ```
  // Code from the Adfox interface for working with direct campaigns.
  parameters["adf_ownerid"] = "168627"
  parameters["adf_p1"] = "bvyhu"
  parameters["adf_p2"] = "fksh"
  parameters["adf_pt"] = "b"
  ```

  Objective-C

  ```
  // Code from the Adfox interface for working with direct campaigns.
  parameters[@"adf_ownerid"] = @"168627";
  parameters[@"adf_p1"] = @"bvyhu";
  parameters[@"adf_p2"] = @"fksh";
  parameters[@"adf_pt"] = @"b";
  ```

Loading multiple ads

Yandex Mobile Ads SDK provides the option to load multiple ads in a single request (up to nine ads).

1. Create an instance of the YMANativeBulkAdLoader class to get native ads.
2. Create a configuration for the `nativeAdRequestConfiguration` request using the YMANativeAdRequestConfiguration class. As the request parameters, you can use the ad unit ID, method for loading images, age, gender characteristics, and other data that might improve the quality of ad selection.
3. Set a delegate for retrieving an ad that implements the YMANativeBulkAdLoaderDelegate protocol.
4. To track the ad loading process, implement the YMANativeBulkAdLoaderDelegate protocol methods: -nativeBulkAdLoader:didLoadAds: and -nativeBulkAdLoader:didFailLoadingWithError:.
5. Send to the loader the request configuration and count of ads requested (the `adsCount` parameter).

   Use the YMAMutableNativeAdRequestConfiguration class to transmit the code received in the Adfox interface (for more information, see Help for Adfox).

   Swift

```
// Code from the Adfox interface for working with direct campaigns.
var parameters = [String: String]()
parameters["adf_ownerid"] = "<example>"
parameters["adf_p1"] = "<example>"
parameters["adf_p2"] = "<example>"
parameters["adf_pfc"] = "<example>"
parameters["adf_pfb"] = "<example>"
parameters["adf_pt"] = "<example>"
parameters["adf_pd"] = "<example>"
parameters["adf_pw"] = "<example>"
parameters["adf_pv"] = "<example>"
parameters["adf_prr"] = "<example>"
parameters["adf_pdw"] = "<example>"
parameters["adf_pdh"] = "<example>"
let requestConfiguration = YMAMutableNativeAdRequestConfiguration(adUnitID: "R-M-XXXXXX")
requestConfiguration.age = age
requestConfiguration.contextQuery = contextQuery
requestConfiguration.contextTags = contextTags
requestConfiguration.gender = gender
requestConfiguration.location = location
requestConfiguration.parameters = parameters

adLoader.loadAds(with: requestConfiguration, adsCount: adsCount)
```

   Objective-C

```
// Code from the Adfox interface for working with direct campaigns.
NSMutableDictionary *parameters = [[NSMutableDictionary alloc] init];
parameters[@"adf_ownerid"] = @"<example>";
parameters[@"adf_p1"] = @"<example>";
parameters[@"adf_p2"] = @"<example>";
parameters[@"adf_pfc"] = @"<example>";
parameters[@"adf_pfb"] = @"<example>";
parameters[@"adf_pt"] = @"<example>";
parameters[@"adf_pd"] = @"<example>";
parameters[@"adf_pw"] = @"<example>";
parameters[@"adf_pv"] = @"<example>";
parameters[@"adf_prr"] = @"<example>";
parameters[@"adf_pdw"] = @"<example>";
parameters[@"adf_pdh"] = @"<example>";
YMAMutableNativeAdRequestConfiguration *requestConfiguration =
        [[YMAMutableNativeAdRequestConfiguration alloc] initWithAdUnitID:@"R-M-XXXXXX"];
requestConfiguration.age = age;
requestConfiguration.contextQuery = contextQuery;
requestConfiguration.contextTags = contextTags;
requestConfiguration.gender = gender;
requestConfiguration.location = location;
requestConfiguration.parameters = parameters;

[adLoader loadAdWithRequestConfiguration:requestConfiguration adsCount:adsCount];
```

Note:

Yandex Mobile Ads SDK doesn't guarantee that the requested number of ads will be loaded. The resulting array will contain from 0 to adsCount NativeAd objects. You can render all the received ad objects separately from each other using the above methods for laying out native ads.

Ways to load images

Automatic loading

If the app simultaneously stores links to just one or a small number of ads, we recommend using automatic loading.

When creating the configuration, set shouldLoadImagesAutomatically to YES:

Swift

```
let requestConfiguration = YMAMutableNativeAdRequestConfiguration(adUnitID: AdUnitID)
requestConfiguration.shouldLoadImagesAutomatically = true
```

Objective-C

```
YMAMutableNativeAdRequestConfiguration *requestConfiguration =
    [[YMAMutableNativeAdRequestConfiguration alloc] initWithAdUnitID:AdUnitID];
    requestConfiguration.shouldLoadImagesAutomatically = YES;
```

The resulting ad will have the images ready. They are stored in the device memory until the ad is destroyed.

Manual loading

If the app simultaneously stores links to a large number of ads, we recommend using manual image loading.

When creating the configuration, set shouldLoadImagesAutomatically to NO:

Swift

```
let requestConfiguration = YMAMutableNativeAdRequestConfiguration(adUnitID: AdUnitID)
requestConfiguration.shouldLoadImagesAutomatically = false
```

Objective-C

```
YMAMutableNativeAdRequestConfiguration *requestConfiguration =
    [[YMAMutableNativeAdRequestConfiguration alloc] initWithAdUnitID:AdUnitID];
    requestConfiguration.shouldLoadImagesAutomatically = NO;
```

The resulting ad will only have the image sizes. To load the images themselves, call the loadImages method on the received ad.

Attention:

All images are cached, but they can be deleted at any time, so you need to call the loadImages() method before every ad impression.

Swift

```
func showAd() {
    // Show ad: custom native view or template
    view.addSubview(adView)
    adView.ad?.loadImages()
}
```

Objective-C

```
- (void)showAd
{
    // Show ad: custom native view or template
    [self.view addSubview:self.adView];
    [self.adView.ad loadImages];
}
```

Notifications about image loading

Restriction: You can only get notifications when loading images manually.

Enabling notifications

To enable notifications that are sent when an image is loaded, call the -addImageLoadingObserver: method.

Swift

```
ad?.add(self)

...
func nativeAdDidFinishLoadingImages(_ ad: YMANativeAd) {
    print("Finished loading images")
}
```

Objective-C

```
[ad addImageLoadingObserver:self];
...
- (void)nativeAdDidFinishLoadingImages:(id<YMANativeAd>)ad
{
    NSLog(@"Finished loading images");
}
```

Disabling notifications

To disable notifications that are sent when an image is loaded, call the -removeImageLoadingObserver: method.

Swift

```
ad?.remove(self)
```

Objective-C

```
[ad removeImageLoadingObserver:self];
```

Ad slider

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

Yandex Mobile Ads SDK lets you render a slider containing related ads. For more information about the slider, see this post.

The slider implements the native advertising paradigm. Publishers can adjust the ad layout based on its features and the design of their apps that render the slider.

Loading the slider

1. Create an instance of the YMANativeAdLoader class to fetch ads in the slider.
2. Create a configuration for the `nativeAdRequestConfiguration` request using the YMANativeAdRequestConfiguration class. As the request parameters, you can use the ad unit ID, method for loading images, age, gender characteristics, and other data that might improve the quality of ad selection.
3. Set a delegate for retrieving an ad that implements the YMANativeAdLoaderDelegate protocol:
4. To track the ad loading process, implement the YMANativeAdLoaderDelegate protocol methods: -nativeAdLoader:didFailLoadingWithError: and -nativeAdLoader:didLoadAd:.
5. To load the ad, send the `loadAdWithRequestConfiguration:` message to the loader.

   Swift

   ```
   adLoader.loadAd(with: requestConfiguration)
   ```

   Objective-C

   ```
   [self.adLoader loadAdWithRequestConfiguration:requestConfiguration];
   ```
6. If the ad loaded, the following method is called:

   Swift

   ```
   func nativeAdLoader(_ loader: YMANativeAdLoader, didLoad ad: YMANativeAd)
   ```

   Objective-C

   ```
   - (void)nativeAdLoader:(YMANativeAdLoader *)loader didLoadAd:(id<YMANativeAd>)ad
   ```
7. If the ad didn't load, the following method is called:

   Swift

   ```
   func nativeAdLoader(_ loader: YMANativeAdLoader, didFailLoadingWithError error: Error)
   ```

   Objective-C

   ```
   - (void)nativeAdLoader:(YMANativeAdLoader *)loader didFailLoadingWithError:(NSError *)error
   ```

   For more information about possible errors, see YMANativeErrorCode.

Ad request with the size set

To get an ad of the correct size, pass the maximum container width and height to an ad request using the parameters property:

Swift

```
adLoader = YMANativeAdLoader()
let requestConfiguration = YMAMutableNativeAdRequestConfiguration(adUnitID: "demo-native-content-yandex")
requestConfiguration.parameters = [ "preferable-height": "123", "preferable-width": "321" ]
adLoader.loadAd(with: requestConfiguration)
```

Objective-C

```
YMANativeAdLoader *adLoader = [[YMANativeAdLoader alloc] init];
YMAMutableNativeAdRequestConfiguration *requestConfiguration =
            [[YMAMutableNativeAdRequestConfiguration alloc] initWithAdUnitID:@"demo-native-content-yandex"];
requestConfiguration.parameters = @{ @"preferable-height": @"123", @"preferable-width": @"321" };
[self.adLoader loadAdWithRequestConfiguration:requestConfiguration];
```

General ad request

Swift

```
// Creating a loader
adLoader = YMANativeAdLoader()
adLoader.delegate = self

// Creating a request configuration
let requestConfiguration = YMANativeAdRequestConfiguration(adUnitID: "<AdUnitID>")

// Passing the request configuration to the loader
adLoader.loadAd(with: requestConfiguration)

// Implementing delegate methods
....

func nativeAdLoader(_ loader: YMANativeAdLoader, didLoad ad: YMANativeAd) {
    // Render the ad }
```

Objective-C

```
// Creating a loader self.adLoader = [[YMANativeAdLoader alloc] init];
self.adLoader.delegate = self;

// Creating a request configuration
YMANativeAdRequestConfiguration *requestConfiguration =
        [[YMANativeAdRequestConfiguration alloc] initWithAdUnitID:@"your_AdUnitID"];

// Passing the request configuration to the loader
[self.adLoader loadAdWithRequestConfiguration:requestConfiguration];

// Implementing delegate methods
....
- (void)nativeAdLoader:(YMANativeAdLoader *)loader didLoadAd:(id<YMANativeAd>)ad
{
     // Render the ad
}
```

Displaying the slider

When the slider is loaded, you must render all its assets.

A successfully loaded slider contains one or more native ads with the same context. Ads in the slider must be displayed within the same shared container: otherwise, ad impressions won't count.

Layout without a template

When the template settings aren't enough to get the desired effect, you can configure native ads manually.

With this method, you can lay out native ads yourself by positioning ad elements in respect of each other. Your ad may contain both mandatory and optional display assets. You can find their full list in Native ad assets.

Tip:

We recommend that you use a layout that includes the complete set of possible assets. Experience has shown that layouts with a complete set of assets are more clickable.

Call the bindAdToSliderView method and pass a container for the ad slider to it.

Each ad in the slider is laid out using a standard native advertising layout method.

Swift

```
    func nativeAdLoader(_ loader: YMANativeAdLoader, didLoad ad: YMANativeAd) {
        self.ad = ad
        ad.delegate = self
        // Проверяем наличие вложенных объявлений
        if ad.ads.count != 0 {
            // Создаем контейнер для слайдера; Вместо YMANativeAdView должен быть ваш наследник этого класса
            let sliderAdView = YMANativeAdView()

            // Вызываем метод bindAd(toSliderView: _) и передаем в него контейнер
            do {
                try ad.bindAd(toSliderView: sliderAdView)
            } catch {
                // Проверяем сообщение об ошибке и исправляем проблему
                return
            }

            for subAd in ad.ads {
                // Подписываемся на делегат
                subAd.delegate = self

                // Создаем рекламное view для объявления
                // Вместо YMANativeAdView должен быть ваш наследник этого класса
                let subAdView = YMANativeAdView()

                // Вызываем метод bind(with: subAdView) для объявления
                do {
                    try subAd.bind(with: subAdView)
                } catch {
                    // Проверяем сообщение об ошибке и исправляем проблему
                    return
                }

                // Добавляем объявление в контейнер
                sliderAdView.addSubview(subAdView)
                // Располагаем объявление в контейнере
            }

        } else {
            // Обработать как обычную нативную рекламу
            // https://yandex.ru/dev/mobile-ads/doc/ios/quick-start/config.html
        }
    }
```

Objective-C

```
- (void)nativeAdLoader:(YMANativeAdLoader *)loader didLoadAd:(id<YMANativeAd>)ad
{
    self.ad = ad;
    self.ad.delegate = self;
    // Проверяем наличие вложенных объявлений
    if (ad.ads.count != 0) {
        // Создаем контейнер для слайдера
        YMANativeAdView *sliderAdView = [[YMANativeAdView alloc] init];
        // Вызываем метод bindAdToSliderView и передаем в него контейнер
        NSError *error = nil;
        [ad bindAdToSliderView:sliderAdView error:&error];

        // Проверяем успешность привязки
        if (error != nil) {
            // Проверяем сообщение об ошибке и исправляем проблему
            return;
        }

        for (id<YMANativeAd> subAd in ad.ads) {
            // Подписываемся на делегат
            subAd.delegate = self;
            // Создаем рекламное view для объявления
            // Вместо YMANativeAdView должен быть ваш наследник этого класса
            YMANativeAdView *subAdView = [[YMANativeAdView alloc] init];
            NSError *error = nil;
            // Вызываем метод bindWithAdView и передаем в него рекламное view
            [subAd bindWithAdView:subAdView error:&error];

            // Проверяем успешность привязки
            if (error != nil) {
                // Проверяем сообщение об ошибке и исправляем проблему
                continue;
            }

            // Добавляем объявление в контейнер
            [sliderAdView addSubview:subAdView];
            // Располагаем объявление в контейнере
        }

    } else {
        // Обработать как обычную нативную рекламу
        // https://yandex.ru/dev/mobile-ads/doc/ios/quick-start/config.html
    }
}
```

Configuring the ad design

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

There are two ways to configure the layout of an ad:

1. Layout using a template.

   The easiest way to work with native ads is to use a standard template for layout. The template already has the set of required assets, and defines their arrangement relative to each other. The template works with any supported type of ad.
2. Layout without a template.

   Create a layout without using a template when the template settings don't give you enough configuration options to make the ad look organic and match the design of the app.

Layout using a template

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

To customize the layout and design, you can use a standard template or create your own design based on a standard template.

Using the standard layout template

Note:

After setting up the layout, set the position and ad size relative to the device screen.

1. Create an instance of the YMANativeBannerView class and set the loaded ad for it:

   Swift

   ```
   let bannerView = YMANativeBannerView()
   bannerView.ad = ad
   view.addSubview(bannerView)
   ```

   Objective-C

   ```
   YMANativeBannerView *bannerView = [[YMANativeBannerView alloc] init];
   bannerView.ad = ad;
   [self.view addSubview:bannerView];
   ```

2. To receive notifications about user interactions with the ad (opening the ad or exiting the app), assign it the YMANativeAdDelegate, which implements the methods:

   - -nativeAd:didDismissScreen:
   - -nativeAd:willPresentScreen:
   - -nativeAdWillLeaveApplication:
   - -viewControllerForPresentingModalView

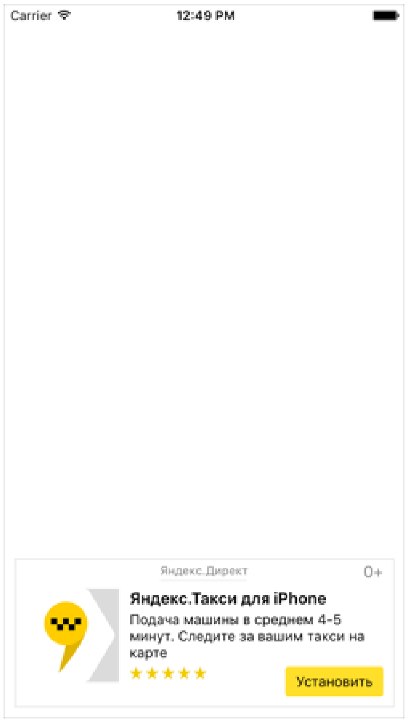
   Swift

   ```
   ad.delegate = self
   ```

   Objective-C

   ```
   ad.delegate = self;
   ```

3. Example of using the standard layout template:



Яндекс.Такси для iPhone

Подача машины в среднем 4-5 минут. Следите за вашим такси на карте

Note: If the standard layout doesn't fit your app, you can change it. For more information, see Creating your own template-based layout.

Creating your own template-based layout

Note:

After setting up the layout, set the position and ad size relative to the device screen.

1. Create an instance of the YMANativeBannerView class and set the loaded ad for it:

   Swift

   ```
   let bannerView = YMANativeBannerView()
   bannerView.ad = ad
   view.addSubview(bannerView)
   ```

   Objective-C

   ```
   YMANativeBannerView *bannerView = [[YMANativeBannerView alloc] init];
   bannerView.ad = ad;
   [self.view addSubview:bannerView];
   ```

2. To receive notifications about user interactions with the ad (opening the ad or exiting the app), assign it the YMANativeAdDelegate, which implements the methods:

   - -nativeAd:didDismissScreen:
   - -nativeAd:willPresentScreen:
   - -nativeAdWillLeaveApplication:
   - -viewControllerForPresentingModalView

   Swift

   ```
   ad.delegate = self
   ```

   Objective-C

   ```
   ad.delegate = self;
   ```

3. Request the settings for the standard layout template:

   Swift

   ```
   let appearance = YMAMutableNativeTemplateAppearance.default()
   ```

   Objective-C

   ```
   YMAMutableNativeTemplateAppearance *appearance = [[YMANativeTemplateAppearance defaultAppearance]
    mutableCopy];
   ```

4. Set the preferred settings.
5. To apply the settings to the template, call the -applyAppearance: method:

   Swift

   ```
   bannerView.apply(appearance)
   ```

   Objective-C

   ```
   [bannerView applyAppearance:appearance];
   ```

Example of layout configuration

Swift

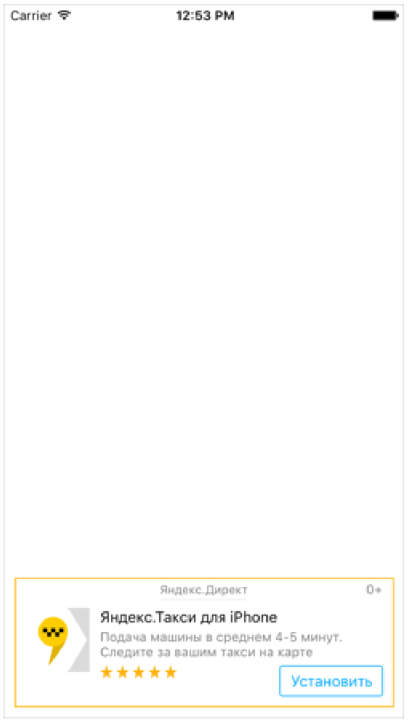
```
// Defining a custom color scheme.
let orangeColor = UIColor(red: 1, green: 176.0/255, blue: 32.0/255, alpha: 1)
let blueColor = UIColor(red: 0, green: 170.0/255, blue: 1, alpha: 1)

// Creating a copy with the settings of the native design template.
let appearance = YMAMutableNativeTemplateAppearance.default()

// Starting to change the native template settings.

// Setting the color for the ad frame.
appearance.borderColor = orangeColor

// Creating a copy with rating settings.
let ratingAppearance = appearance.ratingAppearance?.mutableCopy() as? YMAMutableRatingAppearance

// Setting the color for filled stars in the rating.
ratingAppearance?.filledStarColor = orangeColor
appearance.ratingAppearance = ratingAppearance

// Setting the font color and size for the action button label.
let callToActionTextAppearance = YMALabelAppearance(font: .systemFont(ofSize: 14), textColor: blueColor)

// Setting the button color for the normal state and clicked state, along with the color and thickness of the
 button border.
let callToActionAppearance = YMAButtonAppearance(
    textAppearance: callToActionTextAppearance,
    normalColor: .clear,
    highlightedColor: .gray,
    borderColor: blueColor,
    borderWidth: 1
)
appearance.callToActionAppearance = callToActionAppearance

// Setting the font size and color for the age restriction label.
appearance.ageAppearance = YMALabelAppearance(font: .systemFont(ofSize: 12), textColor: .gray)

// Setting the font size and color for the ad title.
appearance.titleAppearance = YMALabelAppearance(font: .systemFont(ofSize: 14), textColor: .black)

// Setting the font size and color for the main ad text.
appearance.bodyAppearance = YMALabelAppearance(font: .systemFont(ofSize: 12), textColor: .gray)

// Setting the image width and the sizing rule.
let imageConstraint = YMASizeConstraint(type: .fixed, value: 60)

// Applying the settings to the image.
appearance.imageAppearance = YMAImageAppearance(widthConstraint: imageConstraint)
```

Objective-C

```
// Define custom colors.
UIColor *orangeColor =
  [UIColor colorWithRed:255.f / 255.f green:176.f / 255.f blue:32.f / 255.f alpha:1.f];
UIColor *blueColor =
  [UIColor colorWithRed:0.f / 255.f green:170.f / 255.f blue:255.f / 255.f alpha:1.f];

// Creating a copy with the settings of the standard layout template.
YMAMutableNativeTemplateAppearance *appearance = [[YMANativeTemplateAppearance defaultAppearance] mutableCopy];
```

```
// Starting to change the standard template settings.

// Setting the color for the ad frame.
appearance.borderColor = orangeColor;

// Creating a copy with rating settings.
YMAMutableRatingAppearance *ratingAppearance = [appearance.ratingAppearance mutableCopy];

// Setting the color for filled stars in the rating.
ratingAppearance.filledStarColor = orangeColor;
appearance.ratingAppearance = ratingAppearance;

// Setting the font color and size for the action button label.
YMALabelAppearance *callToActionTextAppearance =
    [YMALabelAppearance appearanceWithFont:[UIFont systemFontOfSize:14.f]
                                 textColor:blueColor];

// Setting the button color for the normal state and the clicked state, along with the color and thickness of
 the button border.
YMAButtonAppearance *callToActionAppearance =
    [YMAButtonAppearance appearanceWithTextAppearance:callToActionTextAppearance
                                          normalColor:[UIColor clearColor]
                                     highlightedColor:[UIColor grayColor]
                                          borderColor:blueColor
                                          borderWidth:1.f];
appearance.callToActionAppearance = callToActionAppearance;

// Setting the font size and color for the age restriction label.
appearance.ageAppearance =
  [YMALabelAppearance appearanceWithFont:[UIFont systemFontOfSize:12.f]
                               textColor:[UIColor grayColor]];

// Setting the font size and color for the ad title.
appearance.titleAppearance =
  [YMALabelAppearance appearanceWithFont:[UIFont systemFontOfSize:14.f]
                               textColor:[UIColor blackColor]];

// Setting the font size and color for the main text of the ad.
appearance.bodyAppearance =
  [YMALabelAppearance appearanceWithFont:[UIFont systemFontOfSize:12.f]
                               textColor:[UIColor grayColor]];

// Setting the image width and sizing constraint.
YMASizeConstraint *imageConstraint =
  [YMASizeConstraint constraintWithType:YMASizeConstraintTypeFixed value:60.f];

// Applying the settings to the image.
appearance.imageAppearance =
  [YMAImageAppearance appearanceWithWidthConstraint:imageConstraint];
```

We get our custom design based on the template:



Setting the position and the ad size

Restriction: mediaView size requirements when displaying video ads

Minimum size of an instance of the YMANativeMediaView class, which supports video playback: 300x160 or 160x300.

To support video playback in native ad templates, we recommend setting the width for YMANativeBannerView to at least 300. The correct height for `mediaView` will be calculated automatically based on the width to height ratio.

There are two ways to control size and location:

1. Using the system's `AutoLayout` mechanism.

   Note:

   When using `AutoLayout`, set `constraint` for the `UIView` width. The height is determined automatically based on the specified width.
2. By manually setting all the sizes.

Setting sizes manually

Note:

We don't recommend setting an object width greater than 420 logical pixels.

Set the width and height for the `YMANativeBannerView` object. The height is determined using the +heightWithAd:width:appearance: method which must be passed the ad, the width, and the `YMANativeTemplateAppearance` object (used for setting the ad's appearance).

Swift

```
// Setting the margins on the left and right relative to the screen.
let inset: CGFloat = 50

// Setting the width.
let width = view.frame.width - 2 * inset

// Setting the height.
let height = YMANativeBannerView.height(with: ad, width: width, appearance: nil)

// Setting the vertical position.
let y = view.frame.maxY - height - inset

// Setting the coordinates and sizes for the frame.
bannerView.frame = CGRect(x: inset, y: y, width: width, height: height)
```

Objective-C

```
// Set the margins on the left and right relative to the screen.
CGFloat inset = 50.f;

// Setting the width.
CGFloat width = CGRectGetWidth(self.view.frame) - 2 * inset;

// Setting the height.
CGFloat height = [YMANativeBannerView heightWithAd:ad width:width appearance:nil];

// Setting the vertical position.
CGFloat y = CGRectGetMaxY(self.view.frame) - height - inset;

//  Setting the coordinates and sizes for the frame.
bannerView.frame = CGRectMake(inset, y, width, height);
```

Layout without a template

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

To display native ads, `YMANativeAd` must be bound to a specific `View`. This `View` must be defined as the root element for the `subview` set that the data contained in the native ad will be bound to.

Restriction: mediaView size requirements when displaying video ads

Minimum size of an instance of the YMANativeMediaView class, which supports video playback: 300x160 or 160x300.

To support video playback in native ads, we recommend setting the width for `mediaView` to at least 300. To calculate the appropriate `mediaView` height value, use the aspectRatio property value.

Layout of native ads

1. See the list of required and optional subviews for native ads.
2. Set the values for all required subviews. You can do this using `nib`, or directly in the code. Create an instance of YMANativeAdView and define the `subview` values in `initWithFrame`:

   Example of registering a set of `subviews`:

   Swift

```
override init(frame: CGRect) {
    super.init(frame: frame)
    let titleLabel = createLabel()
    let bodyLabel = createLabel()
    let ageLabel = createLabel()
    let warningLabel = createLabel()
    let sponsoredByLabel = createLabel()
    let priceLabel = createLabel()
    let starRatingView = createStarRatingView()
    let button = createButton()
    let iconImageView = createIconAssetImageView()
    let mediaView = createMediaAssetView()
    addSubview(titleLabel)
    addSubview(bodyLabel)
    addSubview(ageLabel)
    addSubview(warningLabel)
    addSubview(sponsoredByLabel)
    addSubview(priceLabel)
    addSubview(starRatingView)
    addSubview(button)
    addSubview(iconImageView)
    addSubview(mediaView)
    self.titleLabel = titleLabel
    self.bodyLabel = bodyLabel
    self.ageLabel = ageLabel
    self.warningLabel = warningLabel
    self.sponsoredLabel = sponsoredByLabel
    self.callToActionButton = callToActionButton
    self.priceLabel = priceLabel
    self.ratingView = ratingView
    self.iconImageView = iconImageView
    self.mediaView = mediaView
}
```

   Objective-C

```
- (instancetype)initWithFrame:(CGRect)frame
{
    self = [super initWithFrame:frame];
    if (self != nil) {
        UILabel *titleLabel = [self label];
        UILabel *bodyLabel = [self label];
        UILabel *ageLabel = [self secondaryLabel];
        UILabel *warningLabel = [self label];
        UILabel *sponsoredByLabel = [self label];
        UILabel *priceLabel = [self label];
        StarRatingView *ratingView = [self starRatingView];
        UIButton *callToActionButton = [self button];
        UIImageView *iconImageView = [self iconAssetImageView];
        YMANativeMediaView *mediaView = [self mediaAssetView];
        [self addSubview:titleLabel];
        [self addSubview:bodyLabel];
        [self addSubview:ageLabel];
        [self addSubview:warningLabel];
        [self addSubview:sponsoredByLabel];
        [self addSubview:callToActionButton];
        [self addSubview:priceLabel];
        [self addSubview:ratingView];
        [self addSubview:iconImageView];
        [self addSubview:mediaView];
        self.titleLabel = titleLabel;
        self.bodyLabel = bodyLabel;
        self.ageLabel = ageLabel;
        self.warningLabel = warningLabel;
        self.sponsoredLabel = sponsoredByLabel;
        self.callToActionButton = callToActionButton;
        self.priceLabel = priceLabel;
        self.ratingView = ratingView;
        self.iconImageView = iconImageView;
        self.mediaView = mediaView;
    }
    return self;
}
```

3. To receive notifications about user interactions with the ad (opening or closing the ad or exiting the app), assign it the YMANativeAdDelegate, which implements the methods:

   - -closeNativeAd:;
   - -nativeAd:didDismissScreen:
   - -nativeAd:willPresentScreen:
   - -nativeAdWillLeaveApplication:
   - -viewControllerForPresentingModalView
4. Request the values for native ad assets using the -adAssets method. This will help you calculate the position and sizes of these assets in advance.

   Swift

   ```
   let assets = ad.adAssets()
   ```

   Objective-C

   ```
   YMANativeAdAssets *assets = [ad adAssets];
   ```

   Example of getting the image size and aspect ratio of the ad title text and media

   Swift

   ```
   let image = assets.image
   let title = assets.title
   let media = assets.media
   print("Image size: \(image?.size ?? .zero)")
   print("Title: \(title ?? "")")
   print(String(format: "Media aspect ratio: %.2f", media?.aspectRatio ?? 0))
   ```

   Objective-C

   ```
   YMANativeAdImage *image = assets.image;
   NSString *title = assets.title;
   YMANativeAdMedia *media = assets.media;
   NSLog(@"Image size: %@", NSStringFromCGSize(image.size));
   NSLog(@"Title: %@", title);
   NSLog(@"Media aspect ratio: %.2f", media.aspectRatio);
   ```
5. Call the -bindWithAdView:error: method to bind the content to the native ad object.

   Swift

   ```
   // ...
   adView = YMANativeAdView(frame: frame)
   //configure content ad view
   // ...
   func nativeAdLoader(_ loader: YMANativeAdLoader, didLoad ad: YMANativeAd) {
       ad.delegate = self
       do {
           try ad.bind(with: contentAdView)
       } catch {
           print("Error: \(error)")
       }
   }
   ```

   Objective-C

   ```
   // ...
   self.adView = [[YMANativeAdView alloc] initWithFrame:frame];
   //configure content ad view
   // ...
   - (void)nativeAdLoader:(YMANativeAdLoader *)loader didLoadAd:(id<YMANativeAd>)ad
   {
       ad.delegate = self;
       NSError *error = nil;
       BOOL result = [ad bindWithAdView:self.contentAdView error:error];
       if (error != nil) {
           NSLog(@"Error: %@", error);
       }
   }
   ```

   Note:

   If a required element of a native ad has the corresponding `YMANativeAdView` property set to `nil`, binding doesn't occur and the ad isn't displayed. See details in the `error`.

Debugging

Warning:

This is an archived version of the documentation. Actual documentation for all platforms can be found here.

Logging

You can optionally enable logging by using the +enableLogging method. If an impression wasn't registered, a message appears in the console.

Invalid integration indicator for native ads

If an error was made when integrating native ads, an indicator appears on top of the ad in simulator mode. Click on the indicator to see a message with debugging information to help you understand the reason for the error. Click the indicator again to hide the message.

Attention:

By default, the indicator is only shown in simulator mode (device type `YMADeviceTypeSimulator`). You can view device types in YMADeviceType.

To enable the indicator for real devices as well, pass the value `YMADeviceTypeHardware | YMADeviceTypeSimulator` in the enableVisibilityErrorIndicatorFordevicetype: method:

Swift

```
YMAMobileAds.enableVisibilityErrorIndicator(for: [.hardware, .simulator])
```

Objective-C

```
[YMAMobileAds enableVisibilityErrorIndicatorForDeviceType:YMADeviceTypeHardware | YMADeviceTypeSimulator]
```

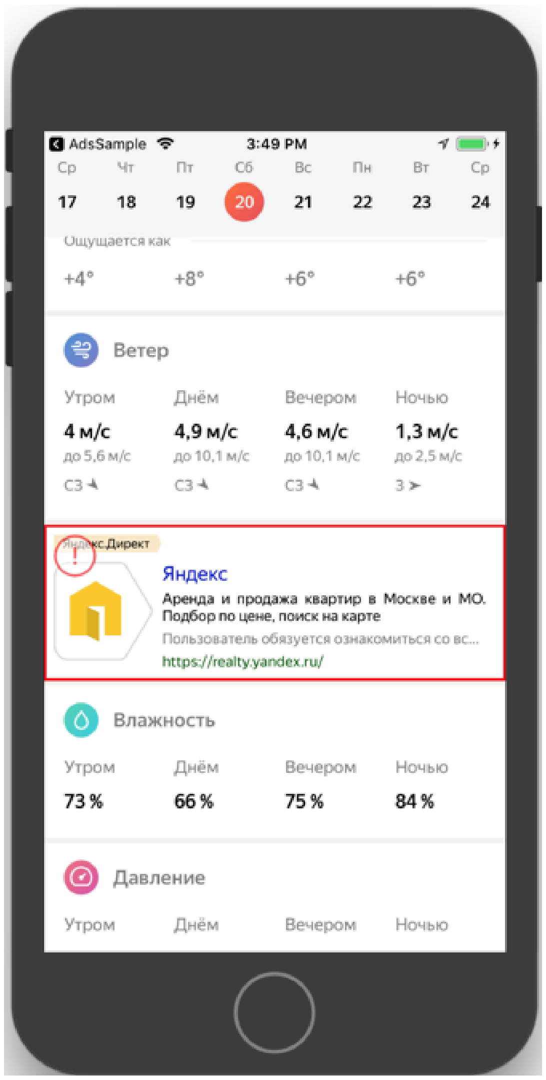
To turn off the indicator, pass the value `YMADeviceTypeNone` in the enableVisibilityErrorIndicatorForDeviceType: method:

Swift

```
YMAMobileAds.enableVisibilityErrorIndicator(for: [])
```

Objective-C

```
[YMAMobileAds enableVisibilityErrorIndicatorForDeviceType:YMADeviceTypeNone]
```

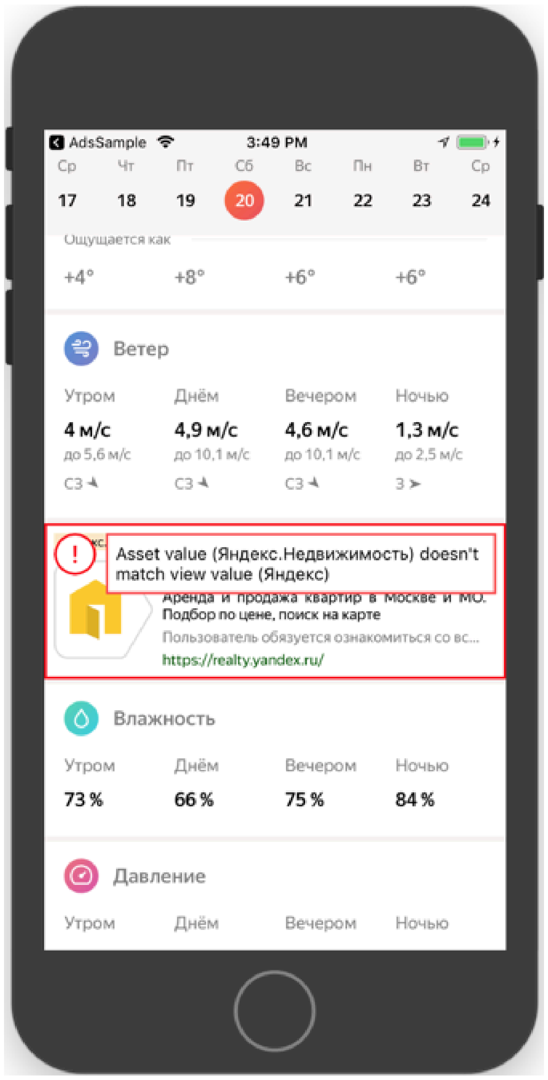


Яндекс

Аренда и продажа квартир в Москве и МО. Подбор по цене, поиск на карте

Пользователь обязуется ознакомиться со вс...

https://realty.yandex.ru/



Asset value (Яндекс.Недвижимость) doesn't match view value (Яндекс)

Аренда и продажа квартир в Москве и МО. Подбор по цене, поиск на карте

Пользователь обязуется ознакомиться со вс...

https://realty.yandex.ru/