What's New in Notifications

Session 720

Michele Campeotto iOS Notifications Gokul Thirumalai Apple Push Notification Service

iOS Notifications

Silent Notifications

- Silent Notifications
- User Notifications

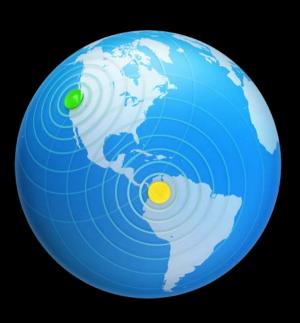
- Silent Notifications
- User Notifications
- Actions

- Silent Notifications
- User Notifications
- Actions
- Text input New!

iOS Notifications

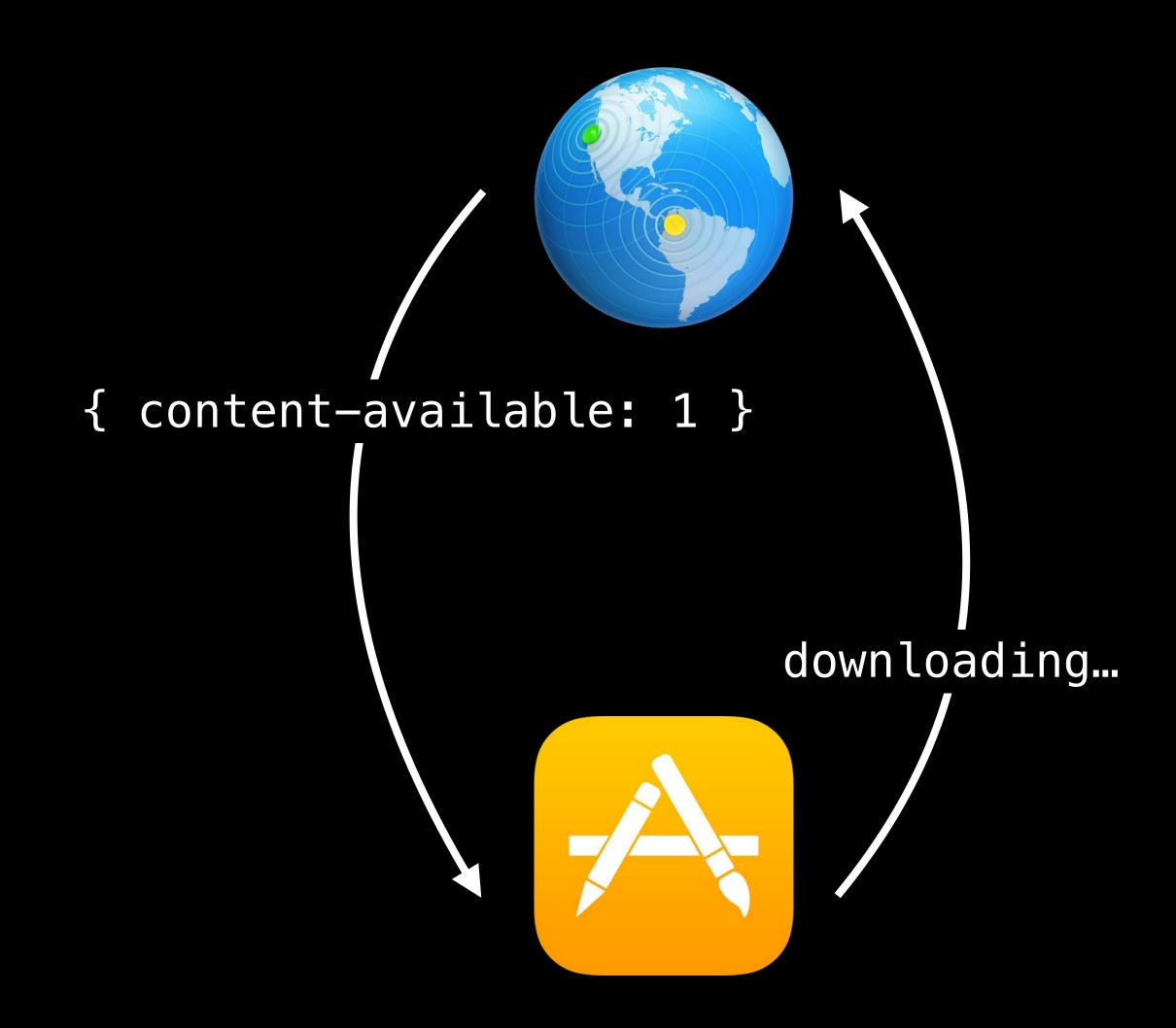
- Silent Notifications
- User Notifications
- Actions
- Text input New!

Apple Push Notification Service



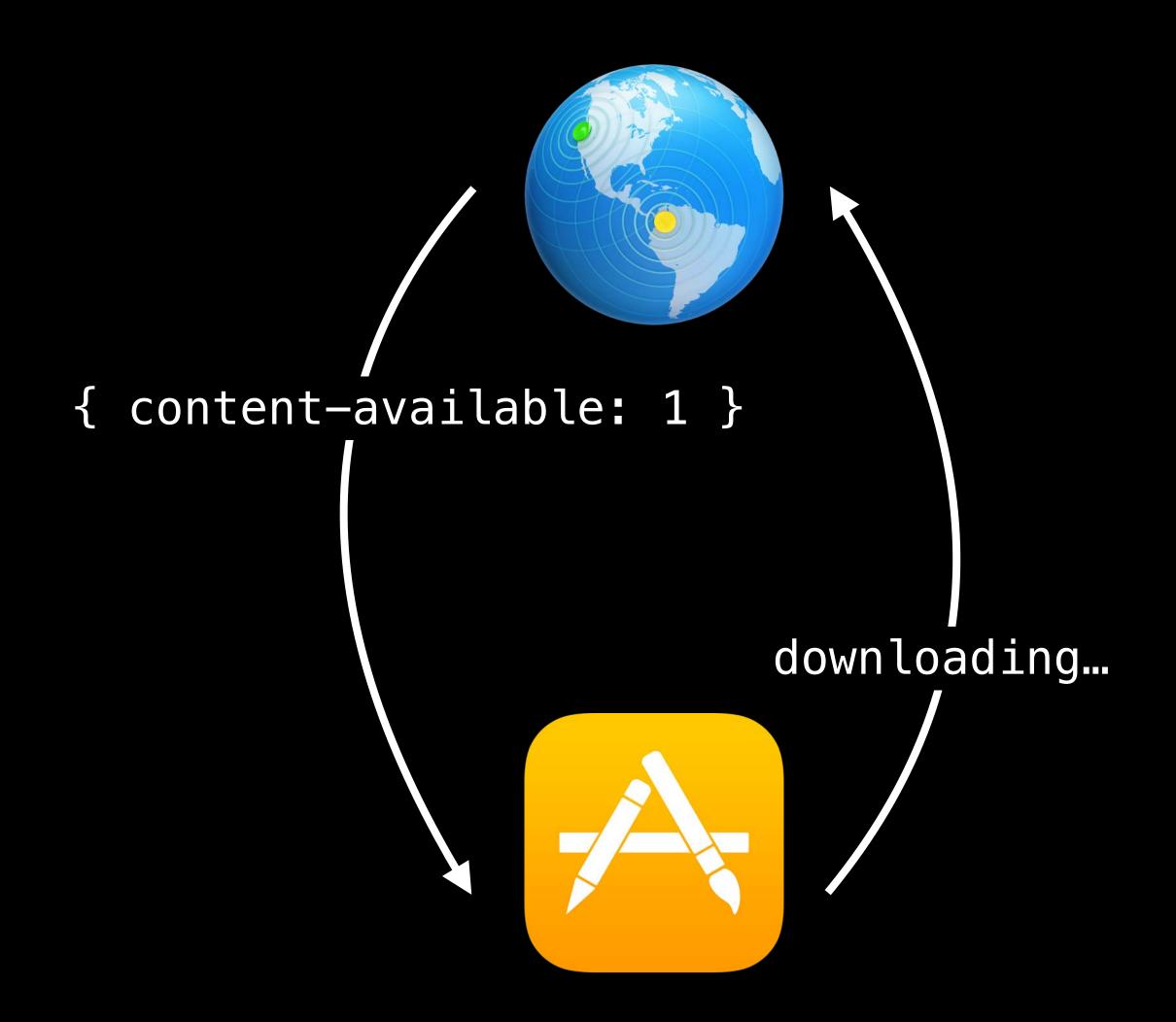






Notify the app

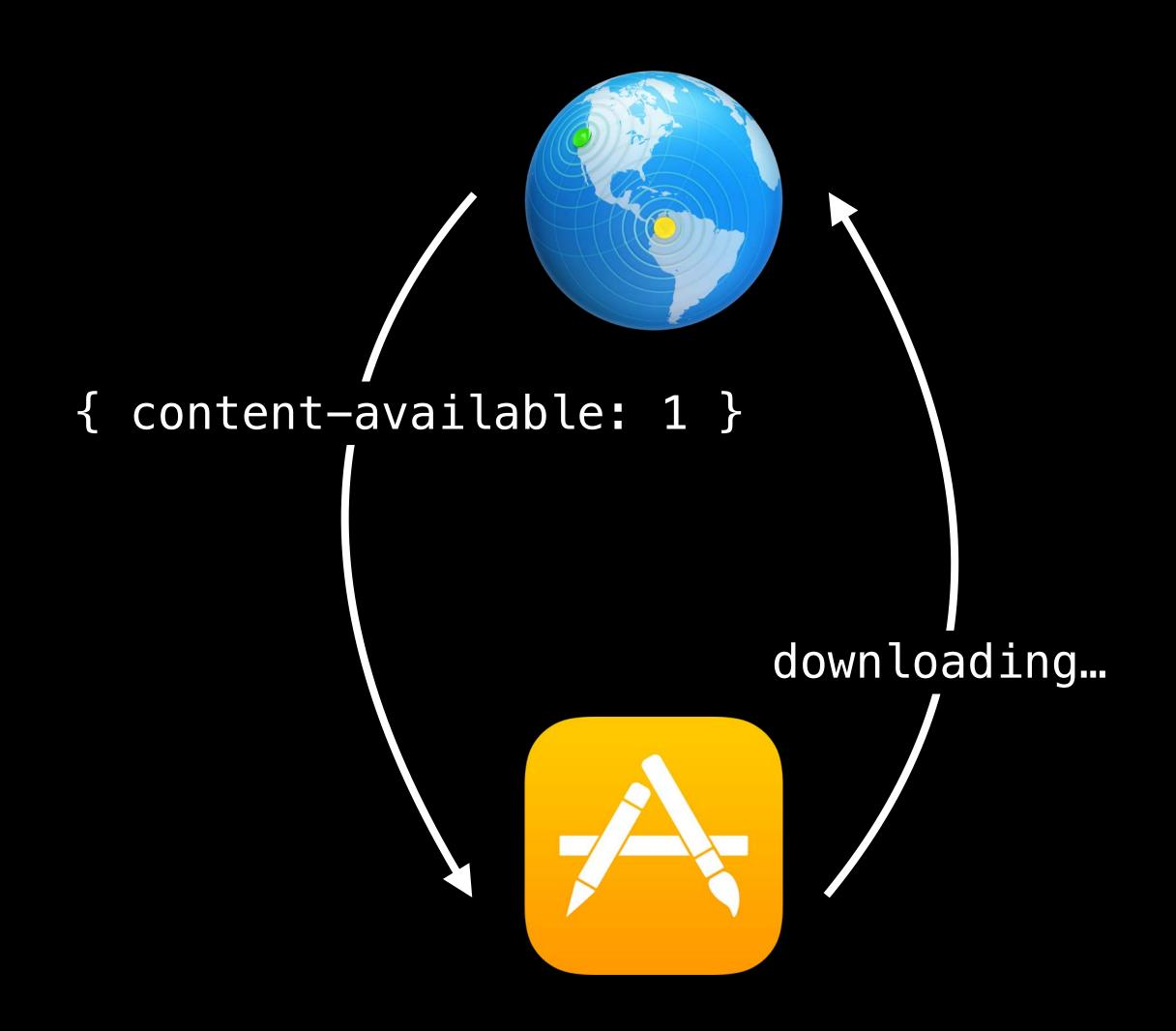
Enabled by default



Notify the app

Enabled by default

Background App Refresh

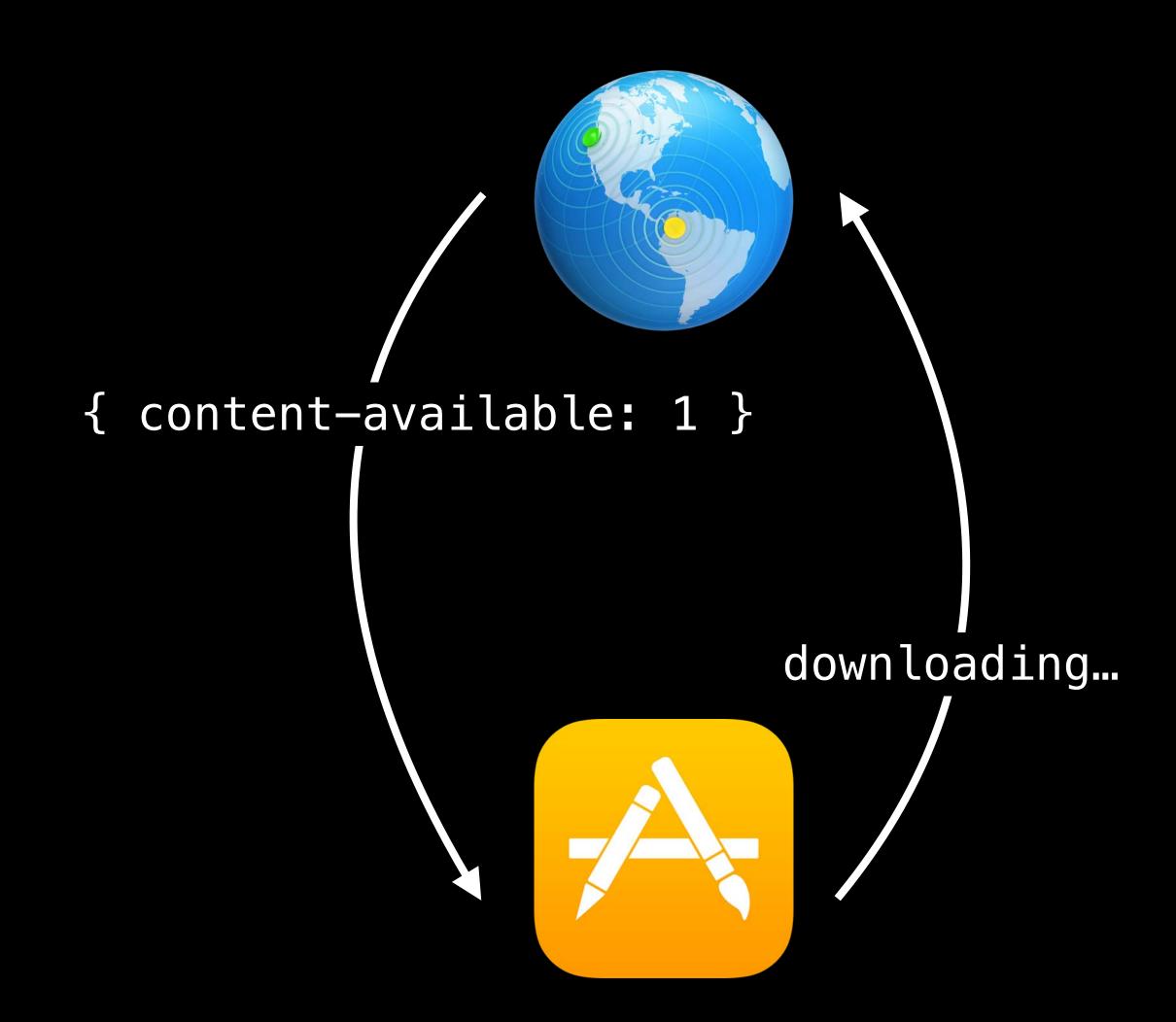


Notify the app

Enabled by default

Background App Refresh

Best effort















Notify the user

Require user permission



Notify the user

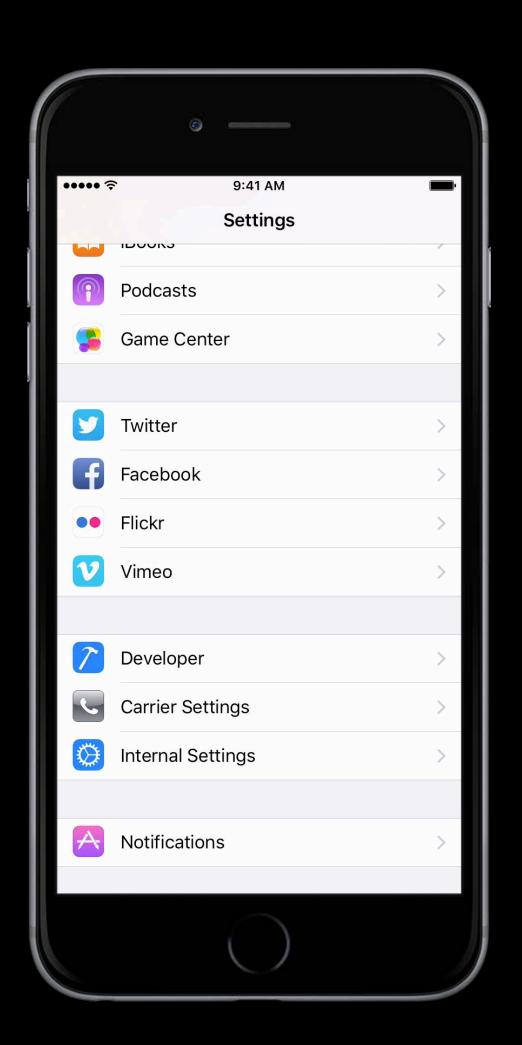
Require user permission



Notify the user

Require user permission

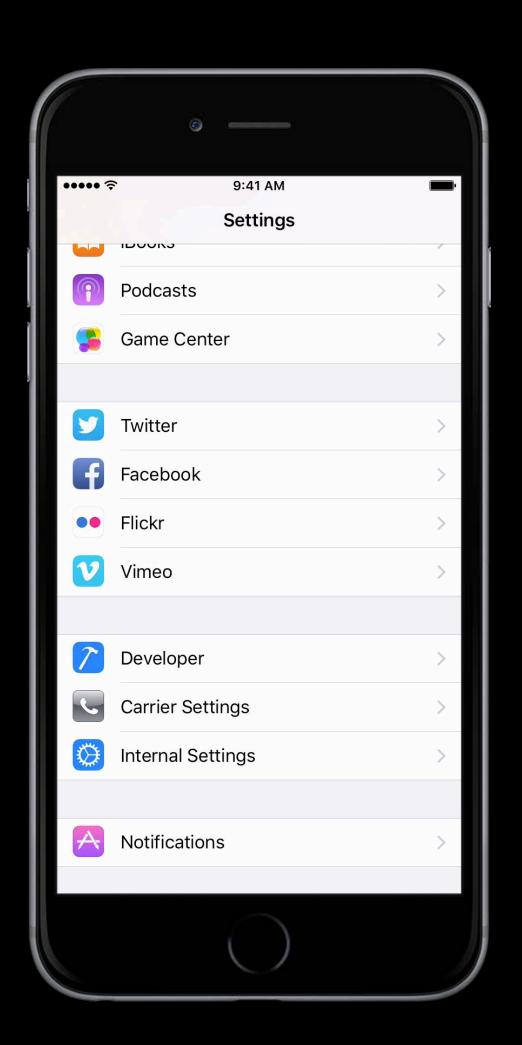
Can be disabled



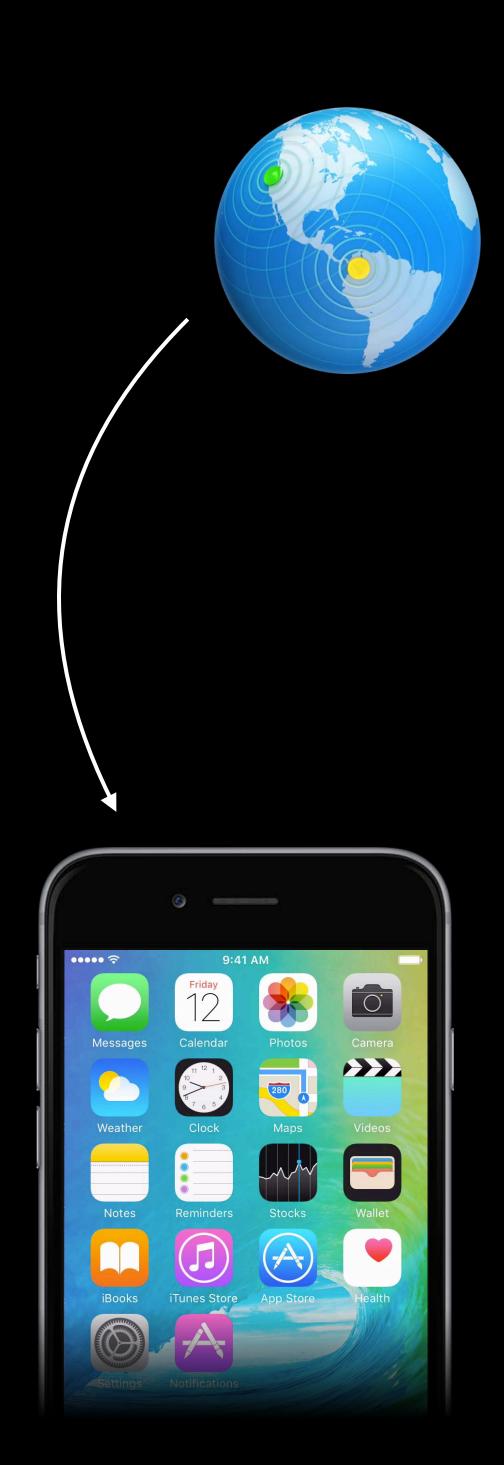
Notify the user

Require user permission

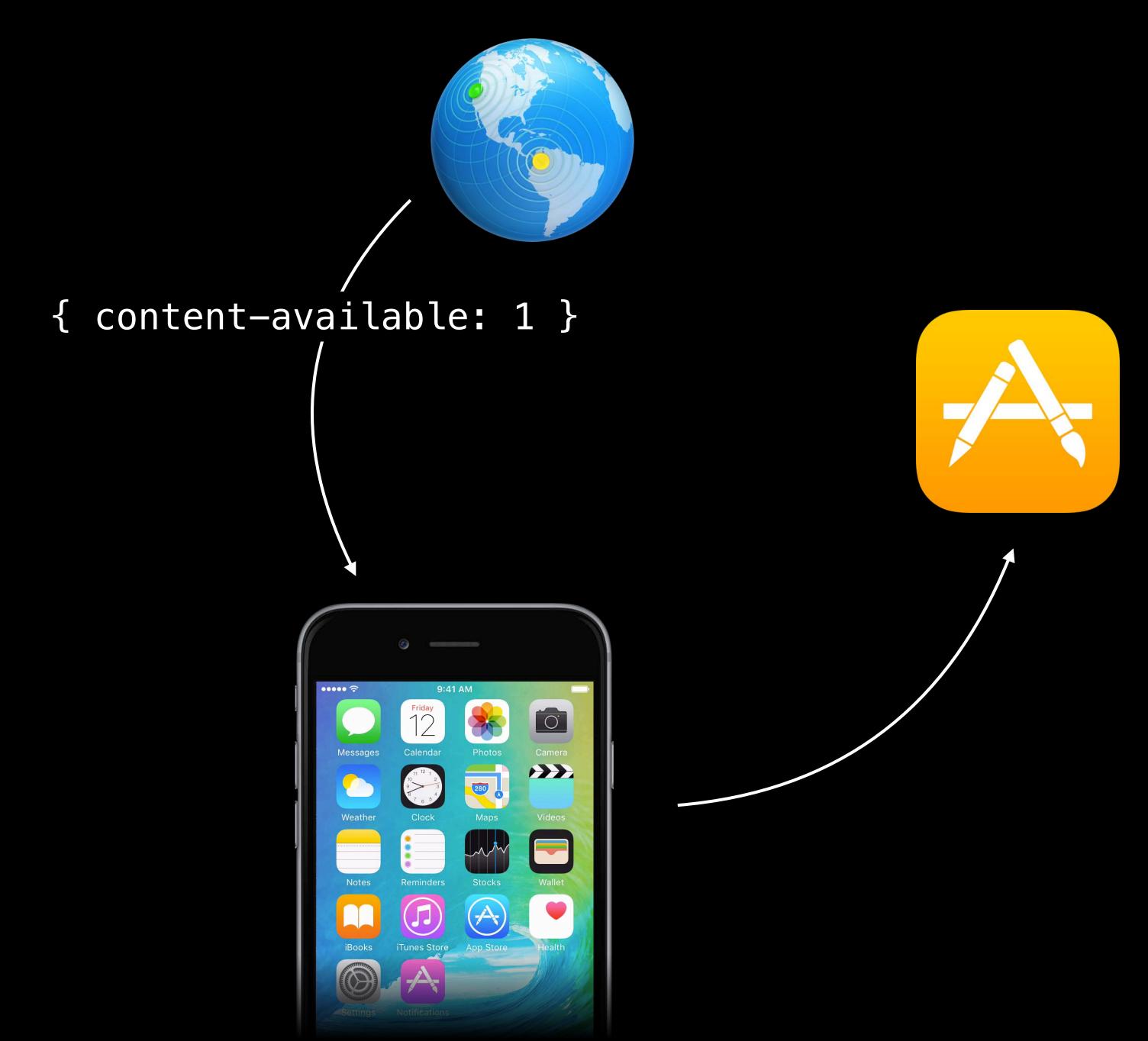
Can be disabled











Remote Notifications





Remote Notifications



Remote Notifications



Remote Notifications

Local Notifications

Time



Remote Notifications

- Time
- Location









Interactive Notifications





Interactive Notifications

Categories





Interactive Notifications

Categories







WatchKit In-Depth, Part 1	Pacific Heights	Wednesday 9:00AM
WatchKit In-Depth, Part 2	Pacific Heights	Wednesday 10:00AM







User Notifications Text Input





New action

New action



New action

Everywhere



New action

Everywhere



New action

Everywhere

Multiple actions



New action

Everywhere

Multiple actions





```
let replyAction = UIMutableUserNotificationAction()
replyAction.title = "Reply"
replyAction.identifier = "comment-reply"
replyAction.activationMode = .Background
replyAction.requiresAuthentication = false
replyAction.behavior = .TextInput
```



```
NEW
```

```
let replyAction = UIMutableUserNotificationAction()
replyAction.title = "Reply"
replyAction.identifier = "comment-reply"
replyAction.activationMode = .Background
replyAction.requiresAuthentication = false
replyAction.behavior = .TextInput
```

```
let category = UIMutableUserNotificationCategory()
category.identifier = "reply"
category.actions = [replyAction]
```

```
protocol UIApplicationDelegate {
  func application(application: UIApplication,
        handleActionWithIdentifier identifier: String?,
        forRemoteNotification notification: [ NSObject : AnyObject ],
        withResponseInfo responseInfo: [ NSObject : AnyObject ],
        completionHandler completionHandler: () -> Void)
}
```

```
func application(application: UIApplication,
   handleActionWithIdentifier identifier: String?,
          forLocalNotification notification: UILocalNotification,
              withResponseInfo responseInfo: [ NSObject : AnyObject ],
             completionHandler completionHandler: () -> Void) {
 if identifier == "comment-reply",
     let response = responseInfo[UIUserNotificationActionResponseTypedTextKey],
         responseText = response as? String {
      viewController.appendText(responseText)
 completionHandler()
```

```
func application(application: UIApplication,
    handleActionWithIdentifier identifier: String?,
          forLocalNotification notification: UILocalNotification,
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Text Input Action Handling the response

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func application(application: UIApplication,
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         responseText = response as? String {
      viewController_appendText(responseText)
 completionHandler()
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Text Input Action Handling the response

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 completionHandler()
```

Apple Watch



Apple Watch



WatchKit In-Depth, Part 1	Pacific Heights	Wednesday 9:00AM
WatchKit In-Depth, Part 2	Pacific Heights	Wednesday 10:00AM

One More Thing...

One More Thing...

iOS 8 compatibility



iOS Notifications

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- Apple Watch

Apple Push Notification Service

Gokul Thirumalai Apple Push Notification Service

Apple Push Notification Service

Review

New Provider API

APNS

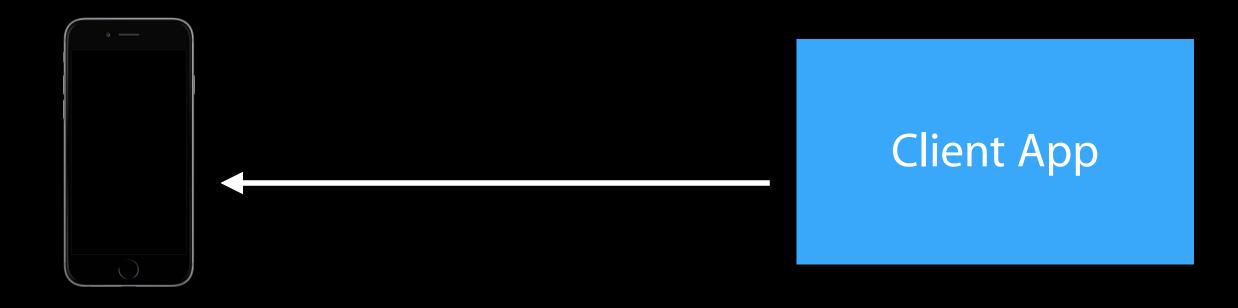
Provider

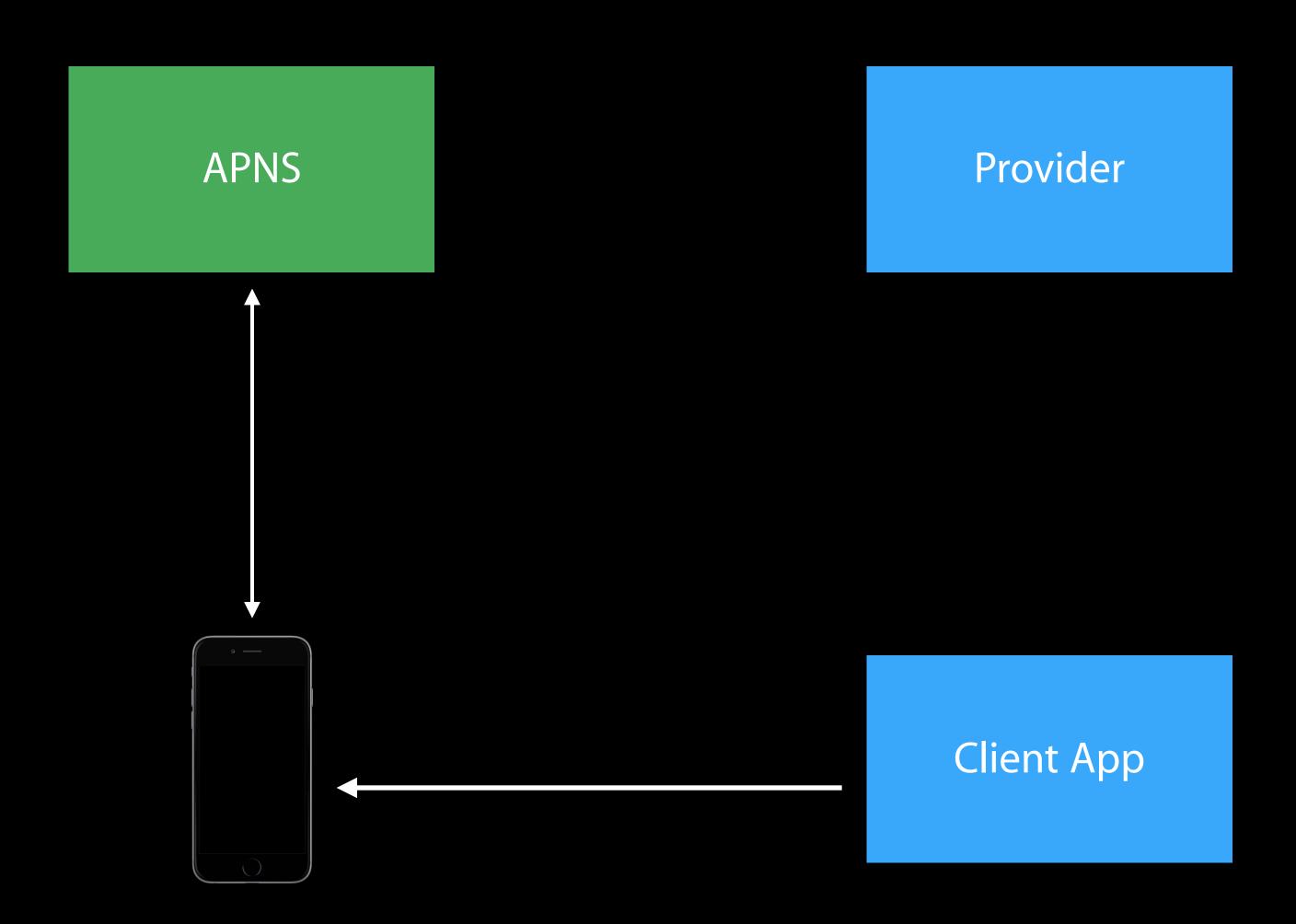


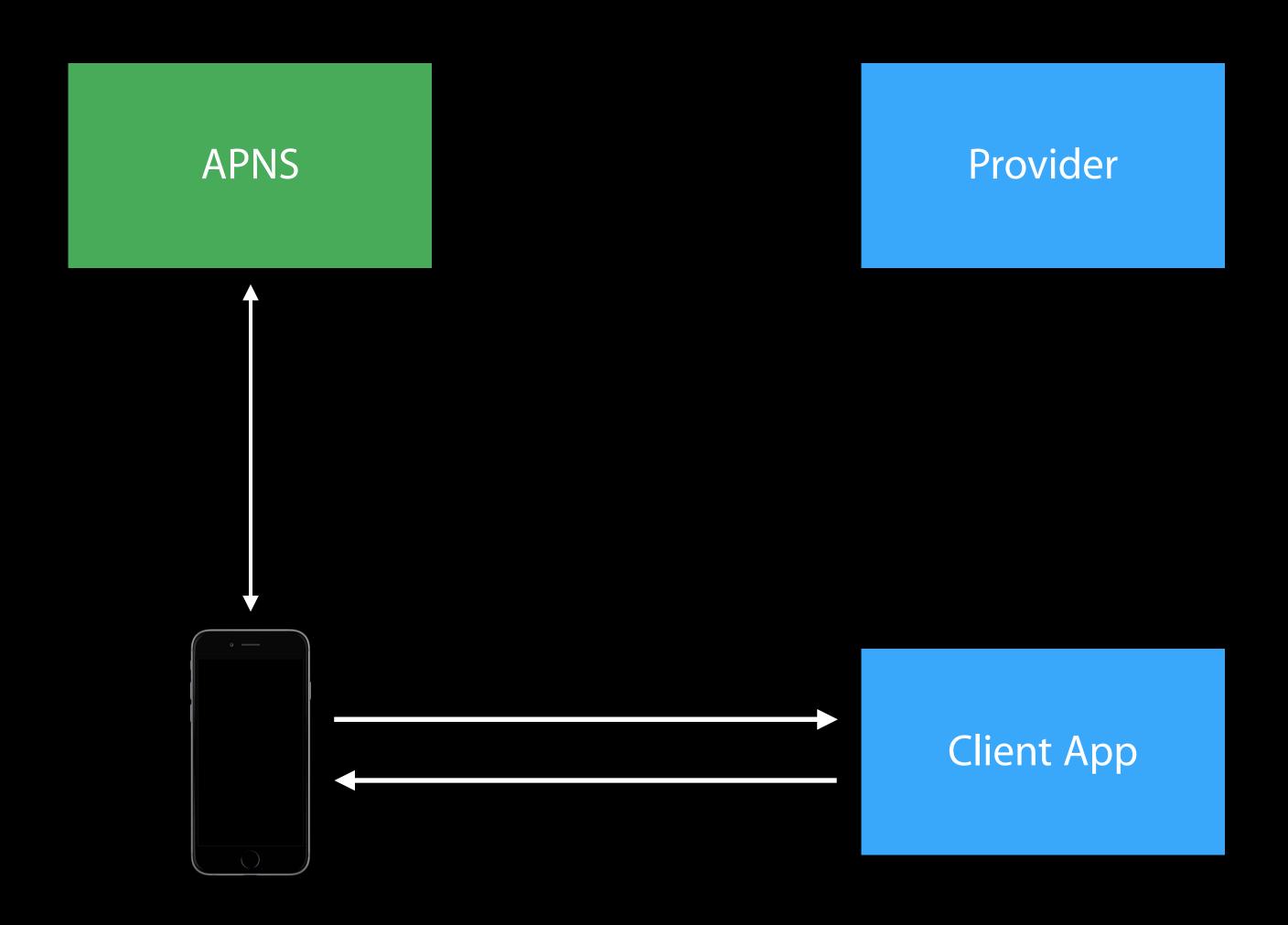
Client App

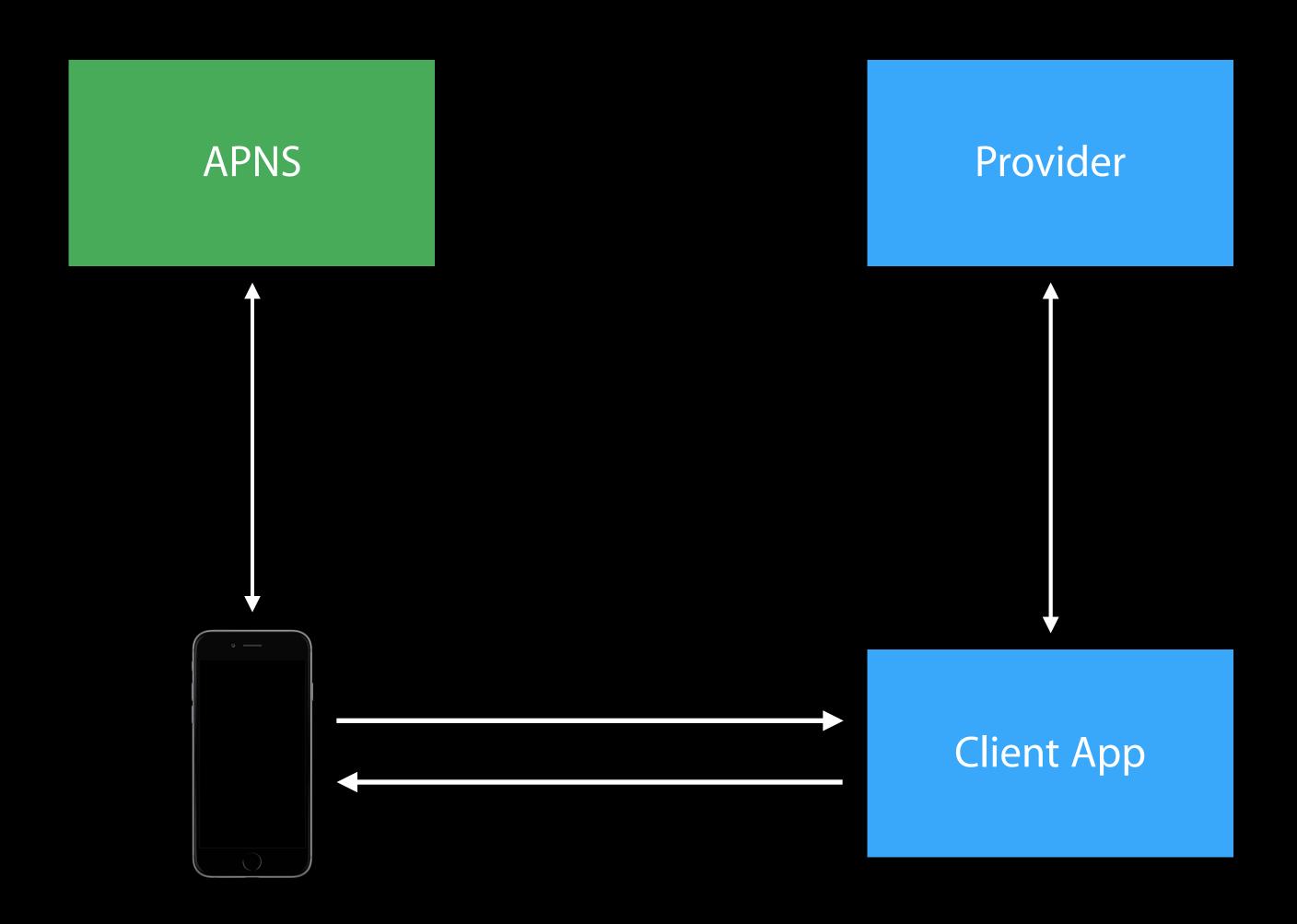
APNS

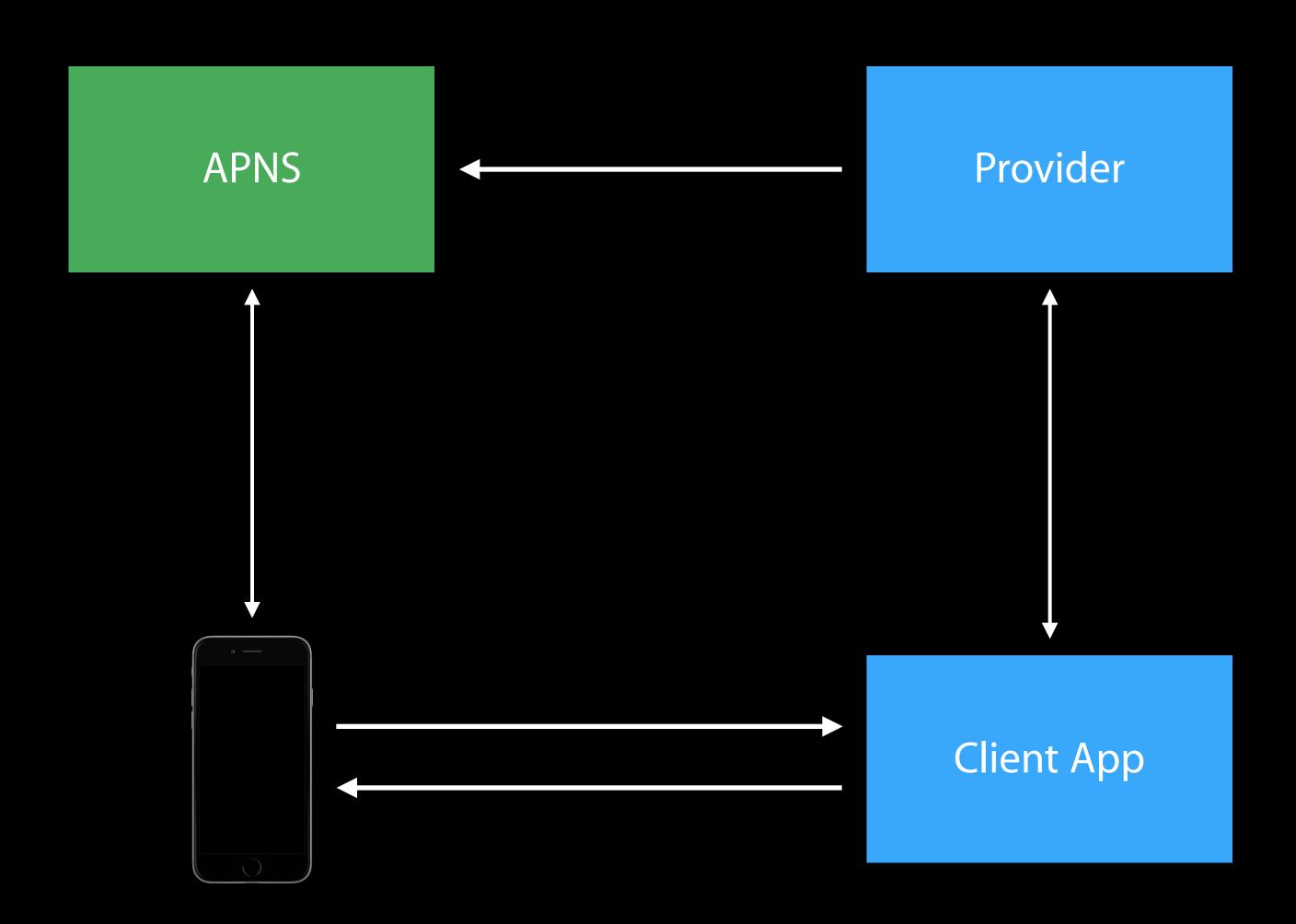
Provider









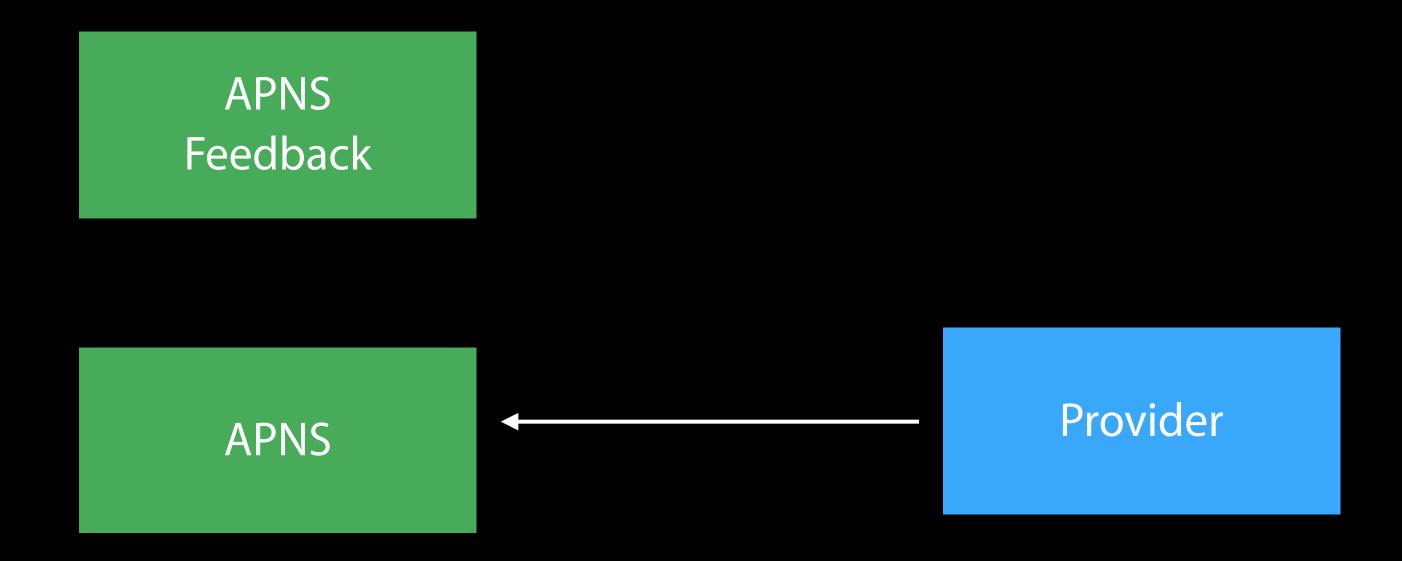


APNS Feedback

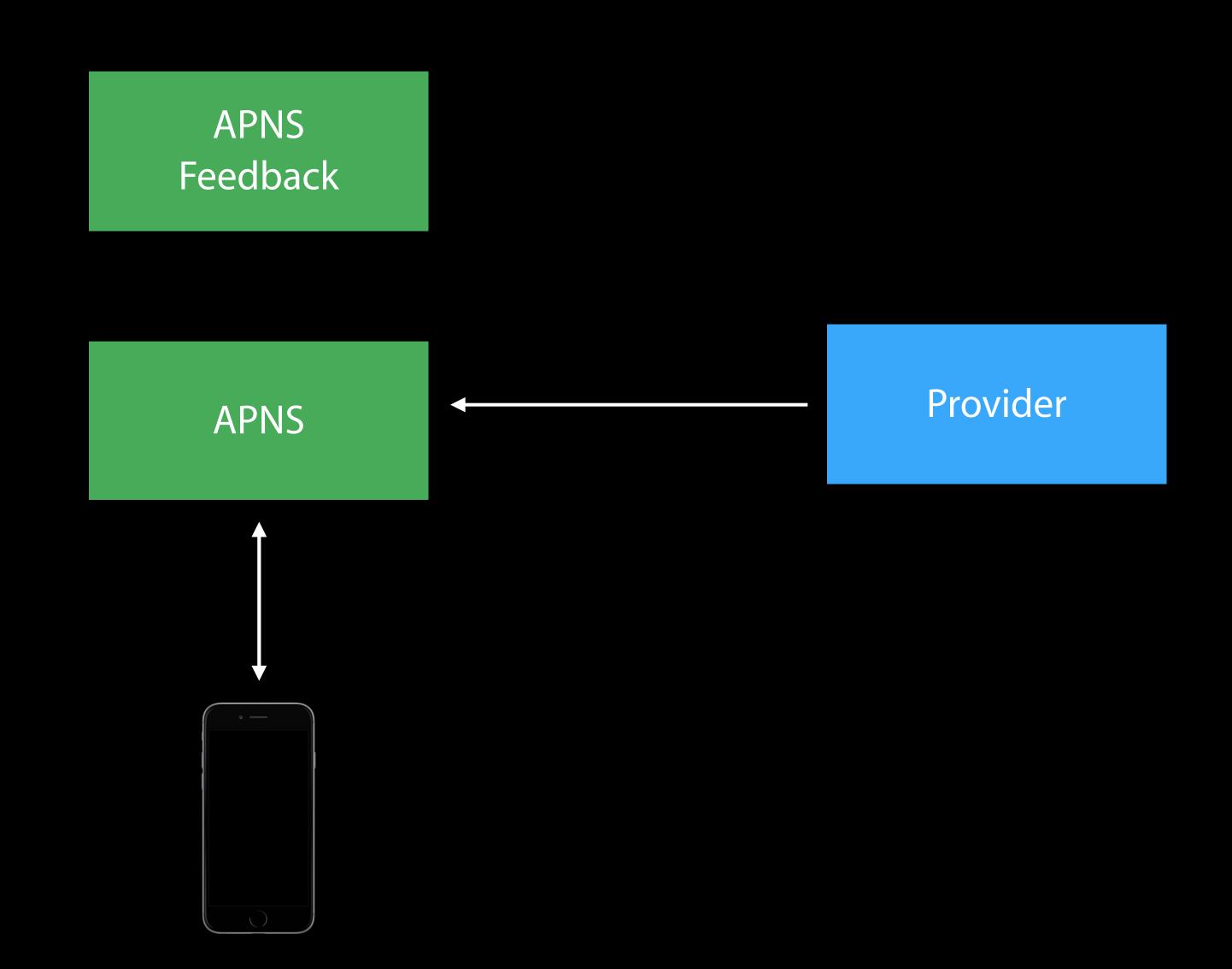
APNS

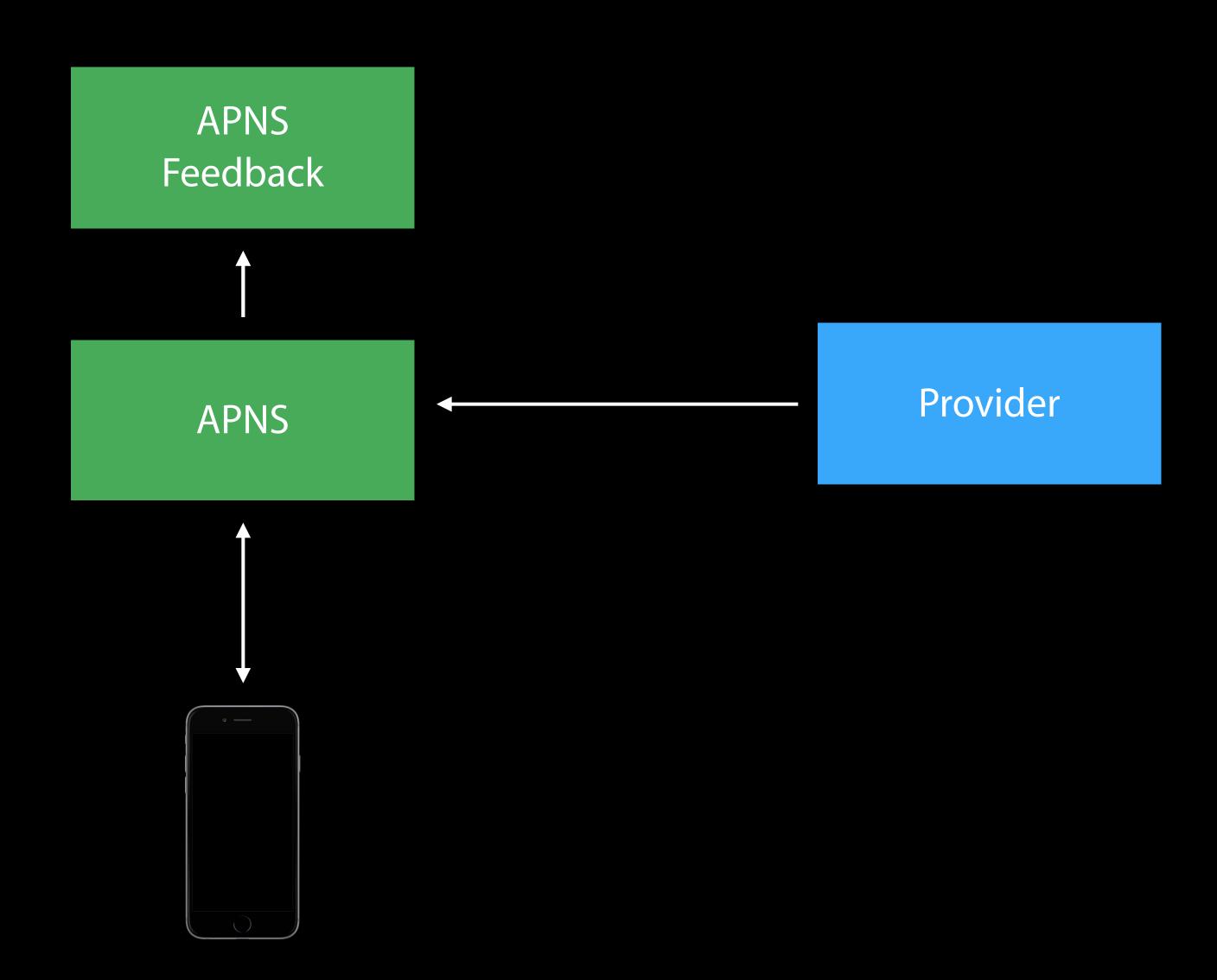
Provider

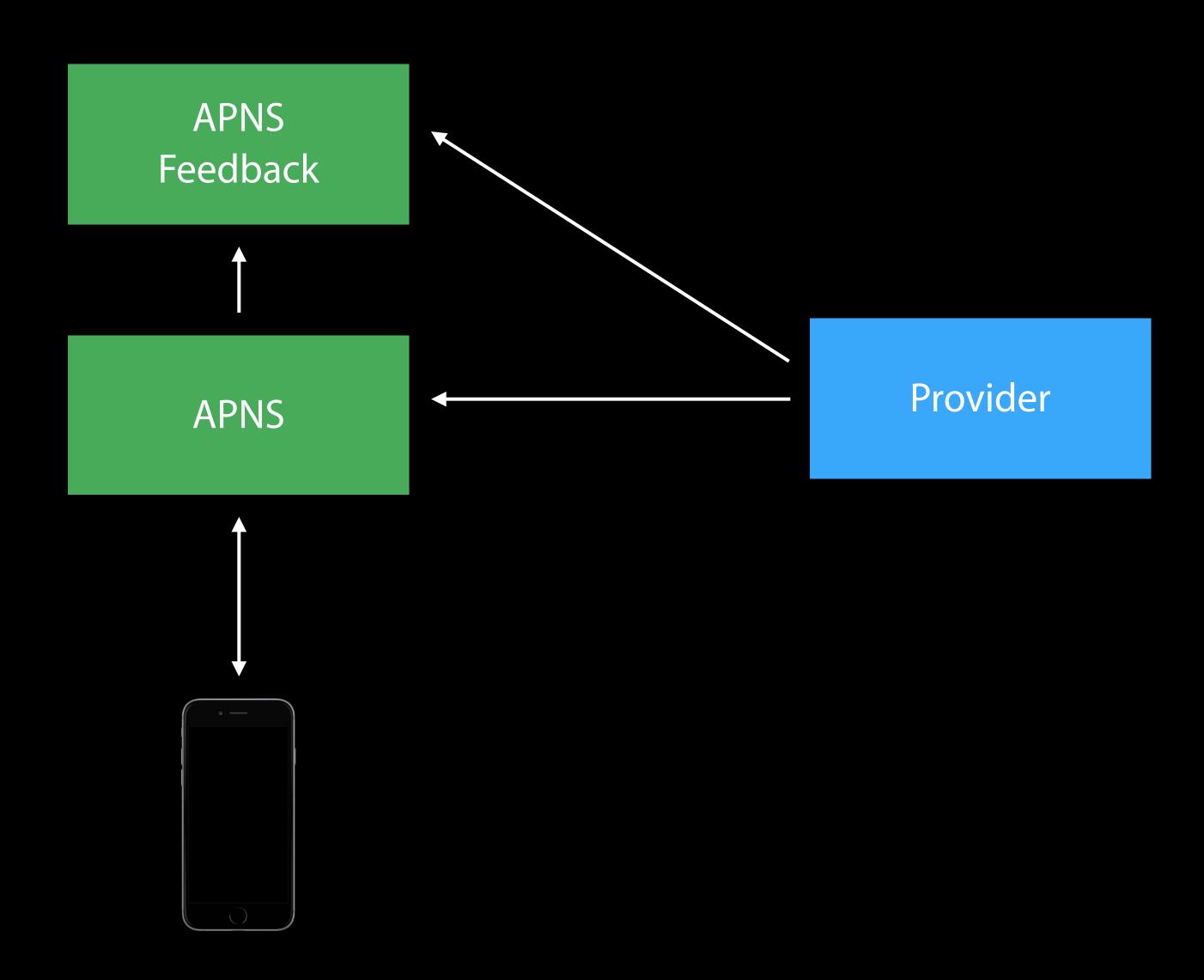












Large Device Tokens

Coming in 2016

New Provider API

Request-response

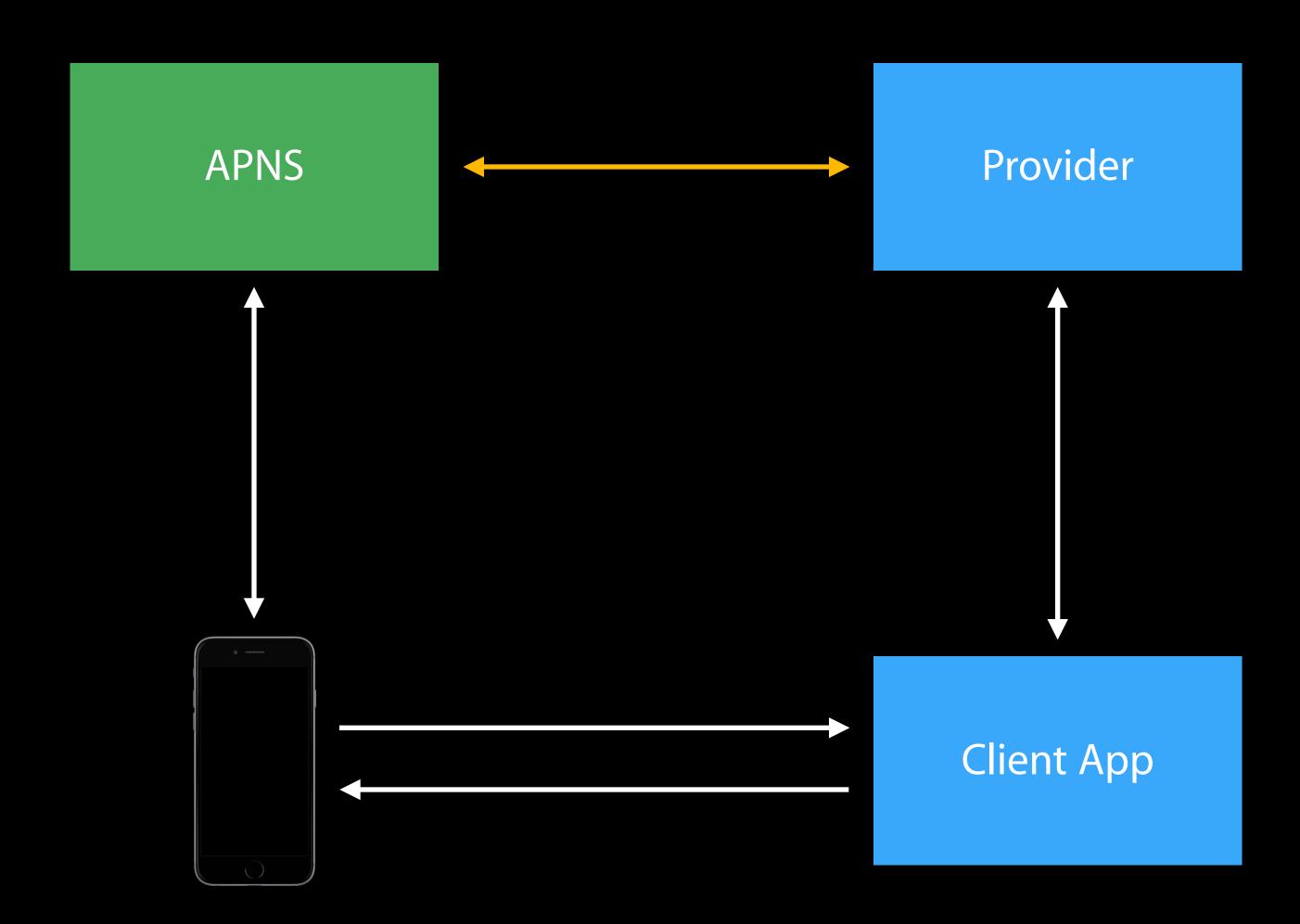
Request-response

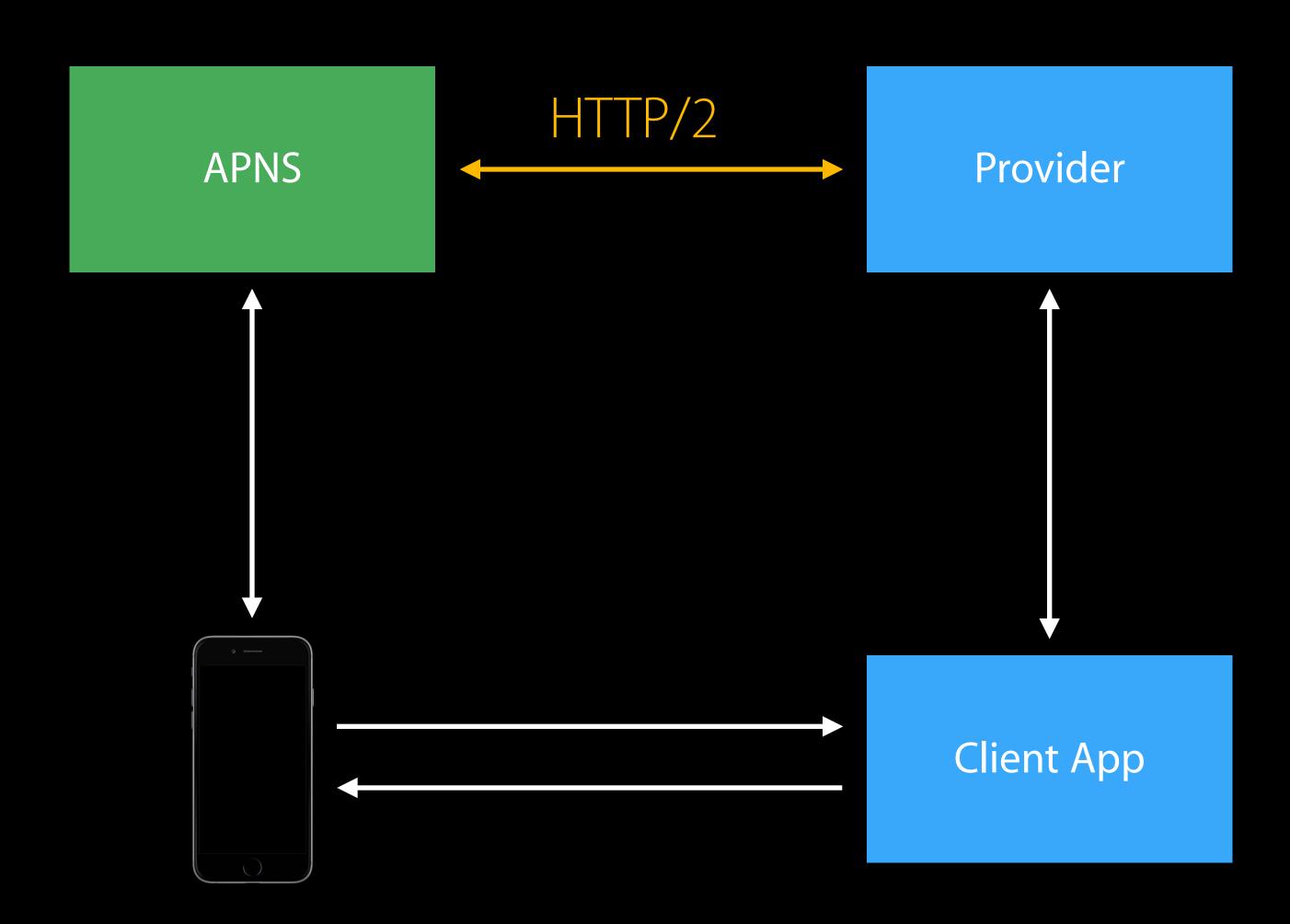
Multiplexed

Request-response

Multiplexed

Binary





HTTP/2 Provider API

Connection



HTTP/2 Provider API

Connection



Connection



Request



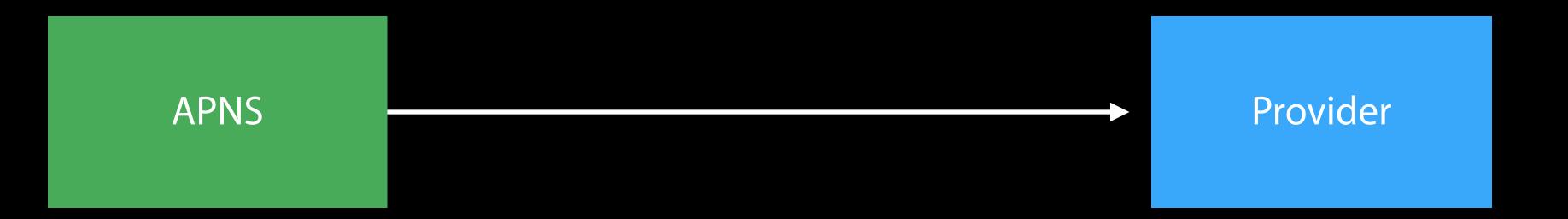
Request



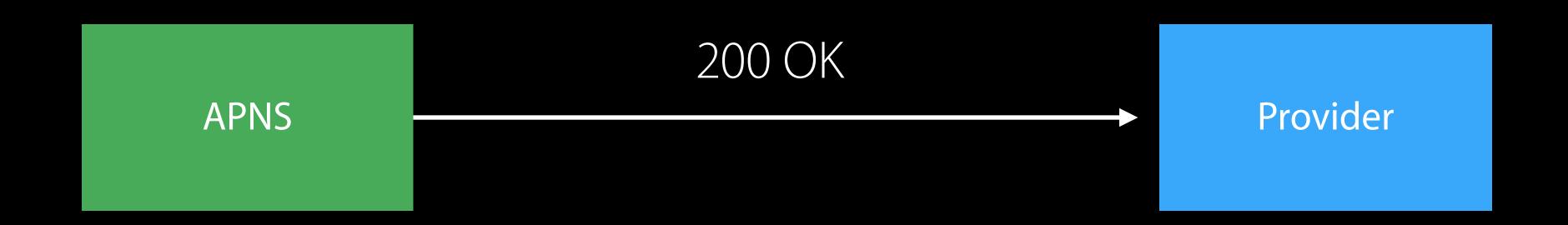
Request



Response



Response



Response



Request example

```
HEADERS
– END_STREAM
+ END_HEADERS
:authority = api.push.apple.com
:method = POST
:path = /3/device/ad2bcd38f6773cdad050411...
content-length = 41
apns-id = de305d54-75b4-431b-adb2-eb6b9e546014
apns-expiration = 0
DATA
+ END_STREAM
{ "aps" : { "alert" : "Hello HTTP/2" } }
```

Request example

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+ END_HEADERS
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DATA

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Request example

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apns-expiration = 0
DATA
+ END_STREAM
{ "aps" : { "alert" : "Hello HTTP/2" } }
```

Response example

HEADERS

- + END_STREAM
- + END_HEADERS
- :status = 200

Response example

```
HEADERS
- END_STREAM
+ END_HEADERS
:status = 400
content-type = application/json
content-length = 31

DATA
+ END_STREAM
{ "reason": "BadDeviceToken" }
```

{ "reason": "BadDeviceToken" }

Response example

+ END_STREAM

```
HEADERS
- END_STREAM
+ END_HEADERS
:status = 400
content-type = application/json
content-length = 31
DATA
```

Response example

HEADERS

```
- END_STREAM
+ END_HEADERS

:status = 400

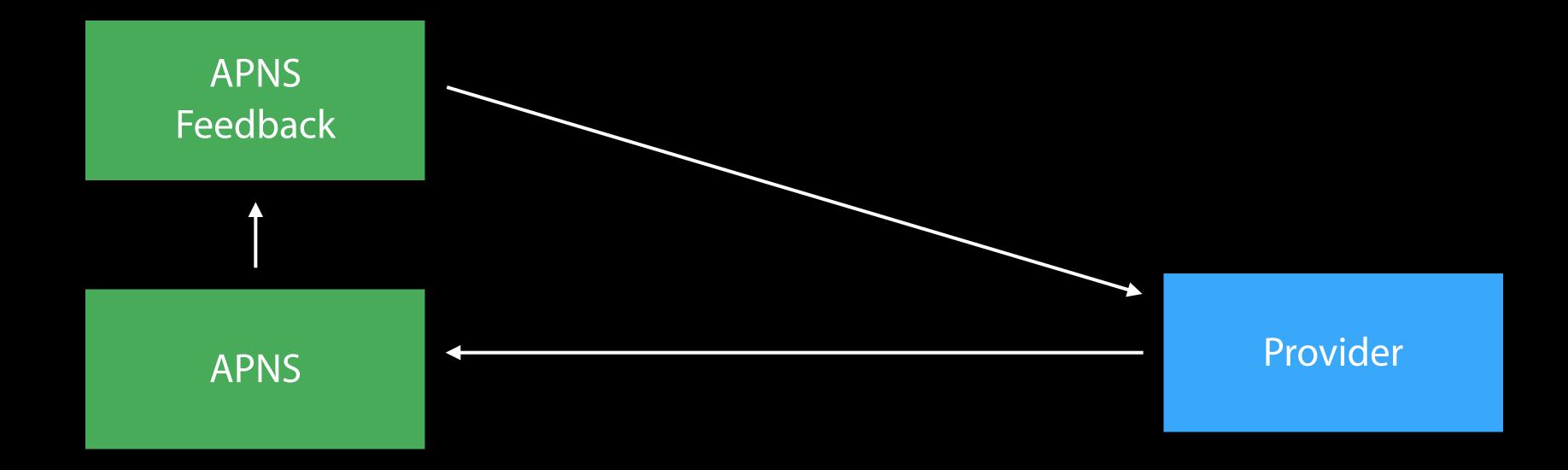
content-type = application/json
content-length = 31

DATA
+ END_STREAM
{ "reason": "BadDeviceToken" }
```

Response example

```
HEADERS
- END_STREAM
+ END_HEADERS
:status = 400
content-type = application/json
content-length = 31

DATA
+ END_STREAM
{ "reason": "BadDeviceToken" }
```







Response example

```
HEADERS
- END_STREAM
+ END_HEADERS
:status = 410
content-type = application/json
content-length = 48

DATA
+ END_STREAM
{ "timestamp": 1432819882 }
```

Response example

HEADERS

- END_STREAM
- + END_HEADERS

```
:status = 410

content-type = application/json
content-length = 48
```

DATA

+ END_STREAM

```
{ "timestamp": 1432819882 }
```

Application push

Application push

VOIP push

Application push

VOIP push

Watch Complication push

Application push

VOIP push

Watch Complication push

Development and production environments

Application push

VOIP push

Watch Complication push

Development and production environments

2KB

New Provider API

Review

HTTP/2 request-response

Instant feedback

Simplified certificate handling

4KB

More Information

Documentation

http://developer.apple.com/notifications/

Technical Support

Apple Developer Forums http://developer.apple.com/forums

Developer Technical Support http://developer.apple.com/support/technical

General Inquiries

Paul Danbold, Core OS Evangelist danbold@apple.com

Related Sessions

Creating Complications with ClockKit	Pacific Heights	Wednesday 11:00AM
Networking with NSURLSession	Pacific Heights	Thursday 9:00AM
Introducing Watch Connectivity	Pacific Heights	Thursday 11:00AM

Related Labs

Notifications Lab E Friday 2:30PM

ÓWWDC15