Using Grouped Notifications

Session 711

Michele Campeotto, iOS User Notifications
Notification groups
App grouping
Custom grouping
Group summaries
Notification Groups
Matt
Notifications planning meeting
Hi Michele, I sent you a calendar invite to start planning new notifications features, let me know...
4 more messages from Work

PODCASTS
Roll Over Easy
Joe Eskenazi for May--- for coffee and donuts! is available.
10 more episodes from Song by Song, Song Explorer, Radiolab, and The Daily

CALENDAR
Flight to Venice
Invitation From Michele
June 10, 2018 at 10:00 AM
Oakland International Airport
1 Airport Dr, Oakland, CA 94621, United States

NEWS
National Geographic
Which South American country has a population size most similar to Lebanon? The winner of the 2018 Geographic Bee got it right.
9 more notifications

NEWS
Food Network
What summer dish is a favorite where you're
PODCASTS
Roll Over Easy
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NEWS
Food Network
What summer dish is a favorite where you're from? We're sharing the most popular recipe in every state.😊😊
1 more notification

MAIL
Michele Campodotto
Tue 11:17 AM
National Geographic
Which South American country has a population size most similar to Lebanon? The winner of the 2018 Geographic Bee got it right.

National Geographic
If the Loch Ness monster is real, these scientists using an advanced type of DNA analysis ought to find it.

National Geographic
This parrot is one of the world's most popular pet birds—and may become one of the rarest.

National Geographic
The unearthing of 2,000-year-old “barbarian” remains has archaeologists rethinking what we know about their battle rituals.

National Geographic
This oddball asteroid trapped near Jupiter may be the first known interstellar visitor to stay in our solar system. Or not.
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National Geographic
This oddball asteroid trapped near Jupiter may be the first known interstellar visitor to stay in our solar system. Or not.
App Grouping
PODCASTS
Song Exploder
2 new episodes are available.
7 more episodes from Song by Song, Roll Over Easy, and You Are Not So Smart
Custom Grouping
let content = UNMutableNotificationContent()
content.title = "Notifications Team"
content.body = "WWDC session after party"
content.threadIdentifier = "notifications-team-chat"
// Creating Groups with Thread Identifiers

let content = UNMutableNotificationContent()
content.title = "Notifications Team"
content.body = "WWDC session after party"
content.threadIdentifier = "notifications-team-chat"
// Creating Groups with Thread Identifiers

{
    "aps": {
        "alert": {
            "title": "Notifications Team",
            "body": "WWDC session after party"
        }
    }

    "thread-id": "notifications-team-chat"
}

// Creating Groups with Thread Identifiers

{
    "aps" : {
        "alert" : {
            "title" : "Notifications Team",
            "body" : "WWDC session after party"
        }
        "thread-id" : "notifications-team-chat"
    }
}
Custom Grouping Examples

Calendar

Messages

Mail
Monday, June 4

- WWDC rehearsal
  Today at 10:45 AM

- WWDC session after party
  Invitation From Michele
  June 6, 2018 at 8:00 PM
  3 more notifications from Michele
threadIdentifier = nil
threadIdentifier = "alerts"

threadIdentifier = nil
threadIdentifier = "alerts"

threadIdentifier = nil
Separate important, actionable notifications from informative updates.
Michele
Time to get on stage, good luck!

Kritarth
To you & Teja
How about we get pizza today?
5 more messages from Teja and Kritarth
threadIdentifier = "gr-michele"

Michele
Time to get on stage, good luck!

Kritarth
To you & Teja
How about we get pizza today?
5 more messages from Teja and Kritarth
Thread identifier = "gr-michele"

Michele
Time to get on stage, good luck!

Thread identifier = "gr-51413"

Krittarth
To you & Teja
How about we get pizza today?

5 more messages from Teja and Krittarth
Create groups for meaningful, personal communications.
Michele
Party after the conference?
We should celebrate after the conference before you leave for your trip!
1 more message from Michele

Mary
Dinner on Friday
Do you want to go get dim sum on Friday? I found a new place I want to try.
1 more message from iCloud

Kritarth
Re: WWDC presentation
Hi Michele How's the WWDC presentation coming along? I am so excited to share all the...
2 more messages for thread Re: WWDC presentation
threadIdentifier = "acct-icloud"

Michele
Party after the conference?
We should celebrate after the conference before you leave for your trip!
1 more message from Michele

Mary
Dinner on Friday
Do you want to go get dim sum on Friday? I found a new place I want to try.
1 more message from iCloud

Kritarth
Re: WWDC presentation
Hi Michele How's the WWDC presentation coming along? I am so excited to share all the...
2 more messages for thread Re: WWDC presentation
threadIdentifier = "vip-michele"

Michele
Party after the conference?
We should celebrate after the conference before you leave for your trip!
1 more message from Michele

threadIdentifier = "acct-icloud"

Mary
Dinner on Friday
Do you want to go get dim sum on Friday? I found a new place I want to try.
1 more message from iCloud

Kritarth
Re: WWDC presentation
Hi Michele How's the WWDC presentation coming along? I am so excited to share all the... 2 more messages for thread Re: WWOC presentation
threadIdentifier = "vip-michele"

threadIdentifier = "acct-icloud"

threadIdentifier = "th-51413"
Respect the user’s priorities and organization.
Notification Groups Summaries
Matt
Notifications planning meeting
Hi Michele, I sent you a calendar invite to start planning new notifications features, let me know...
4 more messages from Work

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National Geographic
Which South American country has a population size most similar to Lebanon? The winner of the 2018 Geographic Bee got it right.
9 more notifications

Food Network
What summer dish is a favorite where you're
// Simple Notification Group Summary

let summaryFormat = "%u more messages"

return UNNotificationCategory(identifier: "category-identifier",
                              actions: [],
                              intentIdentifiers: [],
                              hiddenPreviewsBodyPlaceholder: nil,
                              categorySummaryFormat: summaryFormat,
                              options: [])
// Simple Notification Group Summary

let summaryFormat = "%u more messages"

return UNNotificationCategory(identifier: "category-identifier",
    actions: [],
    intentIdentifiers: [],
    hiddenPreviewsBodyPlaceholder: nil,
    categorySummaryFormat: summaryFormat,
    options: [])
let summaryFormat = "%u more messages"

return UNNotificationCategory(identifier: "category-identifier",
    actions: [],
    intentIdentifiers: [],
    hiddenPreviewsBodyPlaceholder: nil,
    categorySummaryFormat: summaryFormat,
    options: [])
// Hidden Previews Summary Customization

let summaryFormat = "%u more messages"
let hiddenPreviewsPlaceholder = "%u messages"

return UNNotificationCategory(identifier: "category-identifier",
    actions: [],
    intentIdentifiers: [],
    hiddenPreviewsBodyPlaceholder: hiddenPreviewsPlaceholder,
    categorySummaryFormat: summaryFormat,
    options: [])
let summaryFormat = "%u more messages"
let hiddenPreviewsPlaceholder = "%u messages"

return UNNotificationCategory(identifier: "category-identifier",
   actions: [],
   intentIdentifiers: [],
   hiddenPreviewsBodyPlaceholder: hiddenPreviewsPlaceholder,
   categorySummaryFormat: summaryFormat,
   options: [])

Michele
Time to get on stage, good luck!

Kritarth
To you & Teja
How about we get pizza today?
5 more messages from Teja and Kritarth
// Notification Group Summary with Arguments

let summaryFormat = "%u more messages from %@"

return UNNotificationCategory(identifier: "group-messages",
actions: [],
intentIdentifiers: [],
hiddenPreviewsBodyPlaceholder: nil,
categorySummaryFormat: summaryFormat,
options: [])

// Notification Group Summary with Arguments

let summaryFormat = "%u more messages from %@"

return UNNotificationCategory(identifier: "group-messages",
    actions: [],
    intentIdentifiers: [],
    hiddenPreviewsBodyPlaceholder: nil,
    categorySummaryFormat: summaryFormat,
    options: [])
/ Notification Group Summary with Arguments

let summaryFormat = "%u more messages from %@"

return UNNotificationCategory(identifier: "group-messages",
    actions: []
    intentIdentifiers: []
    hiddenPreviewsBodyPlaceholder: nil,
    categorySummaryFormat: summaryFormat,
    options: [])
let content = UNMutableNotificationContent()
content.body = "..."
content.threadIdentifier = "notifications-team"
content.summaryArgument = "Kritarth"
let content = UNMutableNotificationContent()
content.body = "..."
content.threadIdentifier = "notifications-team"
content.summaryArgument = "Kritarth"
// Notification Group Summary Argument

{
    "aps" : {
        "alert" : {
            "body" : "...",
            "summary-arg" : "Kritarth"
        },
        "thread-id" : "notifications-team"
    }
}
// Notification Group Summary Argument

{
    "aps" : {
        "alert" : {
            "body" : "...",
            "summary-arg" : "Kritarth"
        },
        "thread-id" : "notifications-team"
    }
}
Michele
Time to get on stage, good luck!

Kiritarth
To you & Teja
How about we get pizza today?
5 more messages from Teja and Kiritarth
Michele
Party after the conference?
We should celebrate after the conference before you leave for your trip!
1 more message from Michele

Mary
Dinner on Friday
Do you want to go get dim sum on Friday? I found a new place I want to try.
1 more message from iCloud

Kitarth
Re: WWDC presentation
Hi Michele How's the WWDC presentation coming along? I am so excited to share all the...
2 more messages for thread Re: WWDC presentation
// Notification Summary with Argument Count

let content = UNMutableNotificationContent()
content.body = "..."
content.threadIdentifier = "..."
content.summaryArgument = "Song by Song"
content.summaryArgumentCount = 3
// Notification Summary with Argument Count

let content = UNMutableNotificationContent()
content.body = "..."
content.threadIdentifier = "..."
content.summaryArgument = "Song by Song"
content.summaryArgumentCount = 3
Song Exploder
2 new episodes are available.

7 more episodes from Song by Song, Roll Over Easy, and You Are Not So Smart
// Summary Argument Count

{
  "aps" : {
    "alert" : {
      "body" : "...",
      "summary-arg" : "Song by Song",
      "summary-arg-count" : 3
    },
    "thread-id" : "notifications-team"
  }
}
// Summary Argument Count
{
    "aps" : {
        "alert" : {
            "body" : "…",
            "summary-arg" : "Song by Song",
            "summary-arg-count" : 3
        },
        "thread-id" : "notifications-team"
    }
}
Summary Plurals and Localization
Song Exploder
Reissue: Kelela - Rewind is available.
4 more episodes from Radiolab, Roll Over Easy, and The Daily
Song Exploder Reissue: Kelela - Rewind is available.

Redirected: Radiotab, Roll Over Easy 및 The Daily 메시지

소드 더 있음
// Summary Localization

let summaryFormat = "%u more messages"

return UNNotificationCategory(identifier: "category-identifier",
   actions: [],
   intentIdentifiers: [],
   hiddenPreviewsBodyPlaceholder: nil,
   categorySummaryFormat: summaryFormat,
   options: [])
let summaryFormat = "%u more messages"

return UNNotificationCategory(identifier: "category-identifier",
    actions: [],
    intentIdentifiers: [],
    hiddenPreviewsBodyPlaceholder: nil,
    categorySummaryFormat: summaryFormat,
    options: []
)
// Summary Localization

let summaryFormat = NSString.localizedUserNotificationString(forKey: "NOTIFICATION_SUMMARY",
    arguments: nil)

return UNNotificationCategory(identifier: "category-identifier",
    actions: [],
    intentIdentifiers: [],
    hiddenPreviewsBodyPlaceholder: nil,
    categorySummaryFormat: summaryFormat,
    options: [])
// Summary Localization

let summaryFormat = NSString.localizedUserNotificationString(forKey: "NOTIFICATION_SUMMARY",
arguments: nil)

return UNNotificationCategory(identifier: "category-identifier",
actions: [],
intentIdentifiers: [],
hiddenPreviewsBodyPlaceholder: nil,
categorySummaryFormat: summaryFormat,
options: [])
<!-- Summary Localization -->
.plist version="1.0">
<dict>
  <key>NOTIFICATION_SUMMARY</key>
  <dict>
    <key>NSStringLocalizedFormatKey</key>
    <string>%@notifications@</string>
    <key>notifications</key>
    <dict>
      <key>NSStringFormatSpecTypeKey</key>
      <string>NSStringPluralRuleType</string>
      <key>NSStringFormatValueTypeKey</key>
      <string>u</string>
      <key>one</key>
      <string>%u more notification</string>
      <key>other</key>
      <string>%u more notifications</string>
    </dict>
  </dict>
</dict>
</plist>
<!-- Summary Localization -->
<plist version="1.0">
<dict>
   <key>NOTIFICATION_SUMMARY</key>
   <dict>
      <key>NSStringLocalizedFormatKey</key>
      <string>%#@notifications@</string>
      <key>notifications</key>
      <dict>
         <key>NSStringFormatSpecTypeKey</key>
         <string>NSStringPluralRuleType</string>
         <key>NSStringFormatValueTypeKey</key>
         <string>u</string>
         <key>one</key>
         <string>%u more notification</string>
         <key>other</key>
         <string>%u more notifications</string>
      </dict>
   </dict>
</dict>
</plist>
<!-- Summary Localization -->

.plist version="1.0">
<dict>
    <key>NOTIFICATION_SUMMARY</key>
    <dict>
        <key>NSStringLocalizedFormatKey</key>
        <string>%@notifications@</string>
        <key>notifications</key>
        <dict>
            <key>NSStringFormatSpecTypeKey</key>
            <string>NSStringPluralRuleType</string>
            <key>NSStringFormatValueTypeKey</key>
            <string>u</string>
            <key>one</key>
            <string>אחד עדכון אומד</string>
            <key>two</key>
            <string>עדכונים שני עדכונים</string>
            <key>many</key>
            <string>עוד %ע</string>
        </dict>
    </dict>
</dict>
</plist>
<!-- Summary Localization -->
.plist version="1.0">
<dict>
  <key>NOTIFICATION_SUMMARY</key>
  <dict>
    <key>NSStringLocalizedFormatKey</key>
    <string>%#@notifications@</string>
    <key>notifications</key>
    <dict>
      <key>NSStringFormatSpecTypeKey</key>
      <string>NSStringPluralRuleType</string>
      <key>NSStringFormatValueTypeKey</key>
      <string>u</string>
      <key>one</key>
      <string>אחד עדכון אחד</string>
      <key>two</key>
      <string>שני עדכונים שני</string>
      <key>many</key>
      <string>עוד% עדכונים עוד</string>
    </dict>
  </dict>
</dict>
</plist>
<!-- Summary Localization -->
<plist version="1.0">
<dict>
    <key>NOTIFICATION_SUMMARY</key>
    <dict>
        <key>NSStringLocalizedFormatKey</key>
        <string>%@notifications@</string>
        <key>notifications</key>
        <dict>
            <key>NSStringFormatSpecTypeKey</key>
            <string>NSStringPluralRuleType</string>
            <key>NSStringFormatValueTypeKey</key>
            <string>u</string>
            <key>one</key>
            <string>Еще %u уведомление</string>
            <key>few</key>
            <string>Еще %u уведомления</string>
            <key>many</key>
            <string>Еще %u уведомлений</string>
        </dict>
    </dict>
</dict>
</plist>
Еще %u уведомления
<!-- Summary Localization with Arguments -->
.plist version="1.0">
<dict>
    <key>NOTIFICATION_SUMMARY</key>
    <dict>
        <key>NSStringLocalizedFormatKey</key>
        <string>%@notifications@</string>
        <key>notifications</key>
        <dict>
            <key>NSStringFormatSpecTypeKey</key>
            <string>NSStringPluralRuleType</string>
            <key>NSStringFormatValueTypeKey</key>
            <string>u</string>
            <key>one</key>
            <string>%u more notification from %@</string>
            <key>other</key>
            <string>%u more notifications from %@</string>
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</dict>
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            <string>NSStringPluralRuleType</string>
            <key>NSStringFormatValueTypeKey</key>
            <string>u</string>
            <key>one</key>
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        <key>notifications</key>
        <dict>
            <key>NSStringFormatSpecTypeKey</key>
            <string>NSStringPluralRuleType</string>
            <key>NSStringFormatValueTypeKey</key>
            <string>u</string>
            <key>one</key>
            <string>%u more notification from %@</string>
            <key>other</key>
            <string>%u more notifications from %@</string>
        </dict>
    </dict>
</dict>
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    <key>NSStringLocalizedFormatKey</key>
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    <key>notifications</key>
    <dict>
      <key>NSStringFormatSpecTypeKey</key>
      <string>NSStringPluralRuleType</string>
      <key>NSStringFormatValueTypeKey</key>
      <string>u</string>
      <key>one</key>
      <string>%u more notification from %@</string>
      <key>other</key>
      <string>%u more notifications from %@</string>
    </dict>
  </dict>
</dict>
</plist>
<!— Summary Localization with Arguments -->
<plist version="1.0">
<dict>
    <key>NOTIFICATION_SUMMARY</key>
    <dict>
        <key>NSStringLocalizedFormatKey</key>
        <string>%@notifications@</string>
        <key>notifications</key>
        <dict>
            <key>NSStringFormatSpecTypeKey</key>
            <string>NSStringPluralRuleType</string>
            <key>NSStringFormatValueTypeKey</key>
            <string>u</string>
            <key>one</key>
            <string>%u more notification from %@</string>
            <key>other</key>
            <string>%u more notifications from %@</string>
        </dict>
    </dict>
</dict>
</plist>
Allowed Notification Summary Formats
Allowed Notification Summary Formats

Notifications count
• %u more messages
Allowed Notification Summary Formats

Notifications count
• %u more messages

Notifications count and arguments
• %u more messages from %@
Quick Tips
Grouping Different Summaries
Grouping Different Summaries

Simple summaries are joined
• 5 more messages and 3 more photos
Grouping Different Summaries

Simple summaries are joined
• 5 more messages and 3 more photos

Summaries with arguments fall back to default
• 8 more notifications
Rich Grouped Notifications

Extension receives the leading notification

```swift
public protocol UNNotificationContentExtension : NSObjectProtocol {
    public func didReceive(_ notification: UNNotification)
}
```
Rich Grouped Notifications

Extension receives the leading notification

Extension can load other notifications

class UNUserNotificationCenter : NSObject {

    func getDeliveredNotifications(completionHandler: ([UNNotification]) -> Swift.Void)

}
Rich Grouped Notifications

Extension receives the leading notification

Extension can load other notifications

Threading of additional notifications

```swift
public protocol UNNotificationContentExtension : NSObjectProtocol {
    public func didReceive(_ notification: UNNotification)
}
```
Rich Grouped Notifications

Extension receives the leading notification

Extension can load other notifications

Threading of additional notifications

Remove notifications when read

class UNUserNotificationCenter : NSObject {
    func removeDeliveredNotifications(withIdentifiers identifiers: [String]) {
    }
}
Summary

Grouped notifications to help organization

Custom summaries to improve clarity
More Information


<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notifications Lab</td>
<td>Technology Lab 1</td>
<td>Wednesday 4:00PM</td>
</tr>
<tr>
<td>Notifications Lab</td>
<td>Technology Lab 1</td>
<td>Thursday 9:00AM</td>
</tr>
<tr>
<td>Designing Notifications</td>
<td>Hall 2</td>
<td>Friday 10:00AM</td>
</tr>
</tbody>
</table>