线上OOM监控

什么是OOM?

简单来讲,iOS前台应用内存使用超过一定的阈值后,系统会强制回收内存而导致应用进程闪退的现象,称为OutOfMemory;这种闪退区别于其他类型的闪退,Crash监控不能抓取到闪退日志和堆栈的。每种机器闪退的内存阈值都是类似的,可以大概以下图作为参考

设备 RAM	阈值范围(百分制)
256MB	49% - 51%
512MB	53% - 63%
1024MB	57% - 68%
2048MB	68% - 69%
3072MB	63% - 66%
4096MB	77%
6144MB	81%

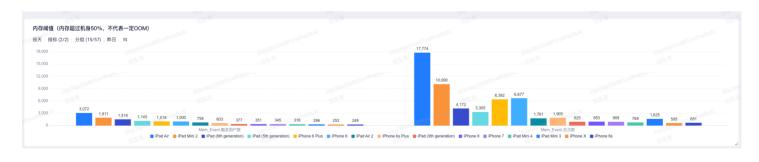
村加的条例:

设备 RAM	阈值范围(百分制)
iPhone X (3072MB)	50%
iPhone XS/XS Max (4096MB)	55%
iPhone XR (3072MB)	63%
iPhone 11/11 Pro Max (4096MB)	54% - 55%

基本上可以认为: 1GB设备 安全阈值 45%, 2-3GB 设备安全阈值 50% 4GB设备安全阈值 55%

二、贪吃蛇实现及结果分析

在5.5.6版本上,我们采用定时器每隔10s我们获取应用占用内存,超过阈值(目前针对1GB设备采用的是45%,其余设备直接采用50%)进行打点上报,数据如下:



详情可以在数数面板上查看。

目前看超过阈值的机型主要集中在2014-2016年的设备上,无论是触发用户数还是总次数都排在前列,其中iPad Air、iPad mini、iPhone6、iPhone6s设备最为显著。

△值得注意的是还是有<mark>iPhoneX及iPhone8</mark>的设备也有类似上报,需要重点关注此类设备超阈值的对应 页面栈。

iPhoneX 页面调用栈部分参数如下:

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主要集中在Unity(暂时打点没有加上具体的unity模式,这部分后续会加上)和无尽游戏上;内存改善上主要还是需要在游戏内下功夫