中间件-行为采集异常捕获数据包大小测试

## 测试目的

测试的最终目的是，除了压缩和base64编码外，是否还需要通过去重减小上传的压缩包大小。

## 测试方法

按照目前的压缩和编码，以相同一个崩溃异常数据为主，分别测试1条、5条、10条、25条、50条和100条所生成的上传文件大小进行比较。

## 测试结果

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 条数 | 数据类型 | 上传的压缩包大小（kb） | 平均上传的压缩包大小（kb） | 解压后文件大小（kb） | 平均解压后文件大小（kb） | 是否上报成功 |
| 1 | 9 | 2.57 |  | 8.13 |  | Y |
| 2.50 | 7.41 | Y |
| 2.33 | 7.08 | Y |
| 2.44 | 7.20 | Y |
| 2.81 | 7.27 | Y |
| 5 | 9 | 3.19 |  | 40.2 |  | Y |
| 3.02 | 38.9 | Y |
| 2.79 | 35.2 | Y |
| 3.35 | 40.6 | Y |
| 3.19 | 40.1 | Y |
| 10 | 9 | 3.65 |  | 72.7 |  | Y |
| 3.63 | 74.6 | Y |
| 3.63 | 74.6 | Y |
| 3.38 | 71.1 | Y |
| 3.36 | 71.0 | Y |
| 25 | 9 | 4.79 |  | 185 |  | Y |
| 5.15 | 189 | Y |
| 5.21 | 203 | Y |
| 5.19 | 180 | Y |
| 4.90 | 190 | Y |
| 50 | 9 | 7.54 |  | 386 |  | Y |
| 6.51 | 362 | Y |
| 7.47 | 373 | Y |
| 7.41 | 378 | Y |
| 7.48 | 373 | Y |
| 100 | 9 | 10.8 |  | 699 |  | Y |
| 12.0 | 758 | Y |
| 11.0 | 702 | Y |
| 11.1 | 725 | Y |
| 12.1 | 729 | Y |

注: 求均值公式“=AVERAGE(c2:c6)”

根据上面测试结果来看，**数据量越大，压缩率越高**。在条数相同的情况下（目前行为采集SDK设置一个上传文件最多是100条），数据大小的波动应该主要是由于每次采集异常现场时的系统日志不同所导致。

### 完整测试数据

请到测试平台中查看完整记录：

[http://172.28.199.58:9380/openbdp/resources/page/checkdata.html#](http://172.28.199.58:9380/openbdp/resources/page/checkdata.html)

机器序列号：700S37500190O

模块名：MobileBehaviorDemo

开始时间：2017-08-29 15:00:00

结束时间：2017-08-29 17:30:00

### 异常数据：

{"stack":"#

#Tue Aug 29 15:46:48 GMT+08:00 2017

#PRODUCT=MobileBehaviorDemo

#versionName=4.0.18-beta

#versionCode=48

STACK\_TRACE=java.lang.IllegalStateException: Could not execute method of the activity

at android.view.View$1.onClick(View.java:4069)

at android.view.View.performClick(View.java:4829)

at android.view.View$PerformClick.run(View.java:20042)

at android.os.Handler.handleCallback(Handler.java:739)

at android.os.Handler.dispatchMessage(Handler.java:95)

at android.os.Looper.loop(Looper.java:135)

at android.app.ActivityThread.main(ActivityThread.java:5291)

at java.lang.reflect.Method.invoke(Native Method)

at java.lang.reflect.Method.invoke(Method.java:372)

at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:969)

at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:764)

Caused by: java.lang.reflect.InvocationTargetException

at java.lang.reflect.Method.invoke(Native Method)

at java.lang.reflect.Method.invoke(Method.java:372)

at android.view.View$1.onClick(View.java:4064)

... 10 more

Caused by: java.lang.NullPointerException: Attempt to invoke virtual method 'boolean java.lang.String.equals(java.lang.Object)' on a null object reference

at com.eebbk.behavior.demo.test.function.crash.CrashActivity.onCrashEvent(CrashActivity.java:59)

... 13 more

java.lang.reflect.InvocationTargetException

at java.lang.reflect.Method.invoke(Native Method)

at java.lang.reflect.Method.invoke(Method.java:372)

at android.view.View$1.onClick(View.java:4064)

at android.view.View.performClick(View.java:4829)

at android.view.View$PerformClick.run(View.java:20042)

at android.os.Handler.handleCallback(Handler.java:739)

at android.os.Handler.dispatchMessage(Handler.java:95)

at android.os.Looper.loop(Looper.java:135)

at android.app.ActivityThread.main(ActivityThread.java:5291)

at java.lang.reflect.Method.invoke(Native Method)

at java.lang.reflect.Method.invoke(Method.java:372)

at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:969)

at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:764)

Caused by: java.lang.NullPointerException: Attempt to invoke virtual method 'boolean java.lang.String.equals(java.lang.Object)' on a null object reference

at com.eebbk.behavior.demo.test.function.crash.CrashActivity.onCrashEvent(CrashActivity.java:59)

... 13 more

java.lang.NullPointerException: Attempt to invoke virtual method 'boolean java.lang.String.equals(java.lang.Object)' on a null object reference

at com.eebbk.behavior.demo.test.function.crash.CrashActivity.onCrashEvent(CrashActivity.java:59)

at java.lang.reflect.Method.invoke(Native Method)

at java.lang.reflect.Method.invoke(Method.java:372)

at android.view.View$1.onClick(View.java:4064)

at android.view.View.performClick(View.java:4829)

at android.view.View$PerformClick.run(View.java:20042)

at android.os.Handler.handleCallback(Handler.java:739)

at android.os.Handler.dispatchMessage(Handler.java:95)

at android.os.Looper.loop(Looper.java:135)

at android.app.ActivityThread.main(ActivityThread.java:5291)

at java.lang.reflect.Method.invoke(Native Method)

at java.lang.reflect.Method.invoke(Method.java:372)

at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:969)

at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:764)

","sysLog":"

--------- beginning of main

--------- beginning of main

I\

GPush\_PushServiceHelper(26125): connect, bSync:false

--------- beginning of main

--------- beginning of main

I\

GPush\_PushServiceHelper(26125): connect, bSync:false

D\

GPush\_PushServiceHelper(26125): connect, this=com.netease.pushservice.PushServiceHelper@10563bd3

--------- beginning of main

--------- beginning of main

I\

GPush\_PushServiceHelper(26125): connect, bSync:false

--------- beginning of main

--------- beginning of main

I\

GPush\_PushServiceHelper(26125): connect, bSync:false

D\

GPush\_PushServiceHelper(26125): connect, this=com.netease.pushservice.PushServiceHelper@10563bd3

D\

GPush\_PushServiceHelper(26125): connect, m\_network=com.netease.pushservice.Network@3ce2f1c2

--------- beginning of main

--------- beginning of main

I\

GPush\_PushServiceHelper(26125): connect, bSync:false

--------- beginning of main

--------- beginning of main

I\

GPush\_PushServiceHelper(26125): connect, bSync:false

D\

GPush\_PushServiceHelper(26125): connect, this=com.netease.pushservice.PushServiceHelper@10563bd3

--------- beginning of main

--------- beginning of main

I\

GPush\_PushServiceHelper(26125): connect, bSync:false

--------- beginning of main

--------- beginning of main

I\

GPush\_PushServiceHelper(26125): connect, bSync:false

D\

GPush\_PushServiceHelper(26125): connect, this=com.netease.pushservice.PushServiceHelper@10563bd3

D\

GPush\_PushServiceHelper(26125): connect, m\_network=com.netease.pushservice.Network@3ce2f1c2

D\

GPush\_PushServiceHelper(26125): needNiepush=true","diskTotal":"2.48 GB","diskUsage":"42%","sdTotal":"24.62 GB","sdUsage":"38%","memTotal":"1.97 GB","memUsage":"51%"}

## 测试修改的代码

### CacheManager.java

/\*\*

\* 获取所有数据

\* @return

\*/

public List<Record> getAllData(){

List<Record> list = DBManager.getInstance().getRecordList();

List<IEvent> events = CachePool.getInstance().getAll();

CachePool.getInstance().clear();

CountManager.getInstance().clean();

list.addAll(ListUtils.eventList2RecordList(events));

List<Record> delList = new ArrayList<>();

for (Record record : list) {

if(record.getEventType() != EType.TYPE\_EXCEPTION){

delList.add(record);

}

}

list.removeAll(delList);

int num = 100; //1、5、10、25、50、100

int listSize = list.size();

if(listSize > 0) {

Record record = list.get(0);

list.clear();

for (int i = 0; i < num; i++) {

list.add(new Record(record.getContentValues()));

}

}

return list;

}

### ReportTask.java

private void doUpload(List<Record> dataList) {

LogUtils.i(TAG, "上传记录数=" + dataList.size());

String strEncode = toJson(dataList);

if (TextUtils.isEmpty(strEncode)) {

//数据异常或者OOM,抛弃

return;

}

File srcFile = createLocalFile(mContext, strEncode);

if (srcFile == null || !srcFile.exists()) {

LogUtils.bfcExceptionLog(TAG, ErrorCode.REPORT\_CREATE\_FILE\_ERROR);

NotifyAgent.saveRecords(dataList);

return;

}

File zipFile = zipCompress(mContext, srcFile.getAbsolutePath());

if (zipFile == null || !zipFile.exists()) {

LogUtils.bfcExceptionLog(TAG, ErrorCode.REPORT\_CREATE\_ZIP\_ERROR);

NotifyAgent.saveRecords(dataList);

return;

}

String copyPath = "/mnt/sdcard/copy/" +

FileUtils.getFileName(zipFile) + "\_" + dataList.size() + ".zip";

LogUtils.i(TAG, "copyPath:" + copyPath);

LogUtils.i(TAG, "copy ok:" + copyOrMoveFile(zipFile, new File(copyPath), false));

MediaLibraryUtils.scanFile(mContext, copyPath);

UploadUtils.getInstance().uploadFile(zipFile);

}

/\*\*

\* 暂时不开放, 设为私有

\* <p>

\* 复制或移动文件

\*

\* @param srcFile 源文件

\* @param destFile 目标文件

\* @param isMove 是否移动

\* @return {@code true}: 复制或移动成功<br>{@code false}: 复制或移动失败

\*/

private boolean copyOrMoveFile(File srcFile, File destFile, boolean isMove) {

if (srcFile == null || destFile == null) return false;

// 源文件不存在或者不是文件则返回false

if (!srcFile.exists() || !srcFile.isFile()) return false;

// 目标文件存在且是文件则返回false

if (destFile.exists() && destFile.isFile()) return false;

// 目标目录不存在返回false

if (!FileUtils.createDirOrExists(destFile.getParentFile())) return false;

try {

return FileUtils.writeFile(destFile, new FileInputStream(srcFile), false)

&& !(isMove && !FileUtils.deleteFile(srcFile));

} catch (FileNotFoundException e) {

e.printStackTrace();

return false;

} catch (IOException e) {

e.printStackTrace();

return false;

}

}