

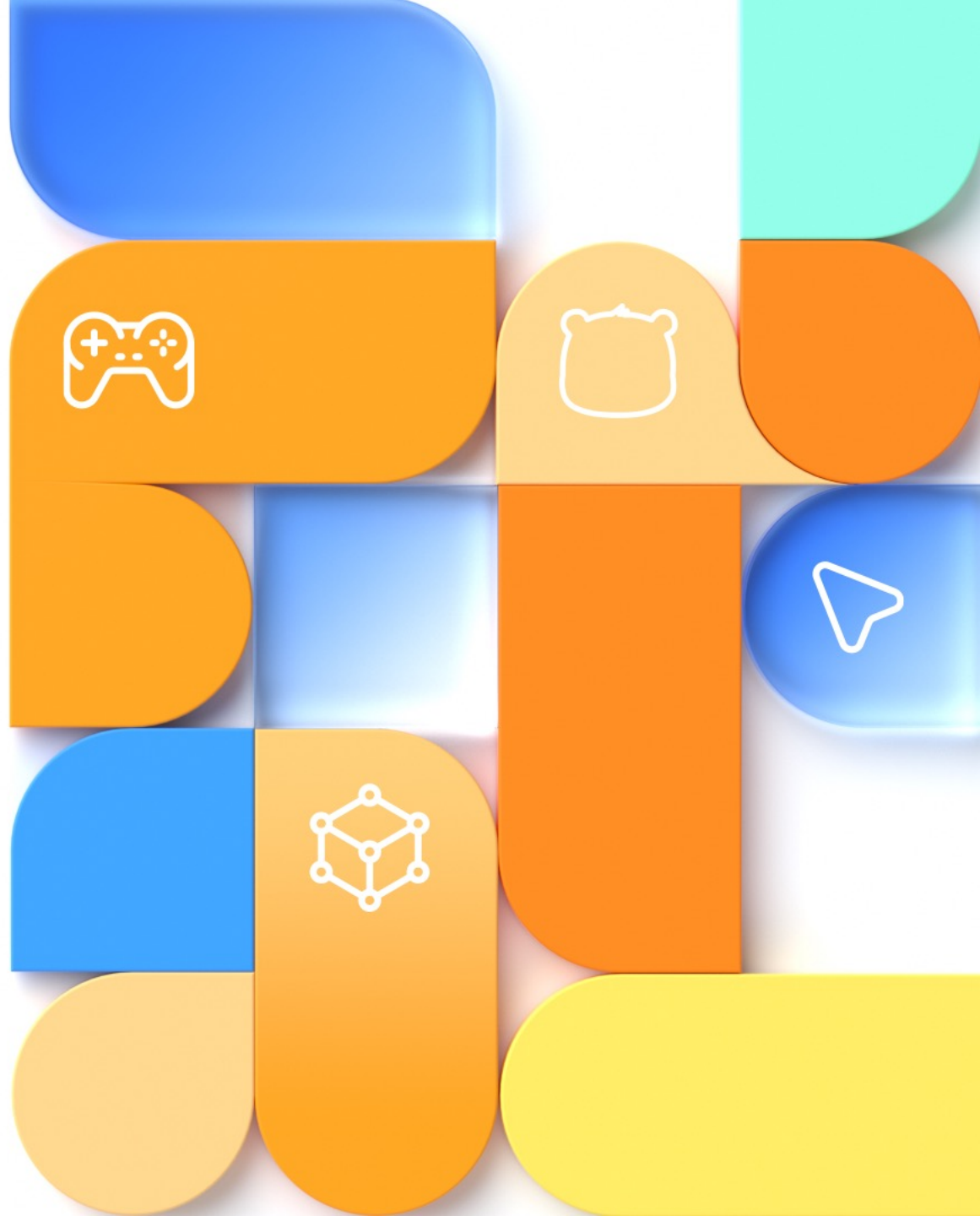


从《斗罗大陆：魂师对决》 到《斗罗大陆之魂师对决》

——重度游戏转为小游戏的救赎之路

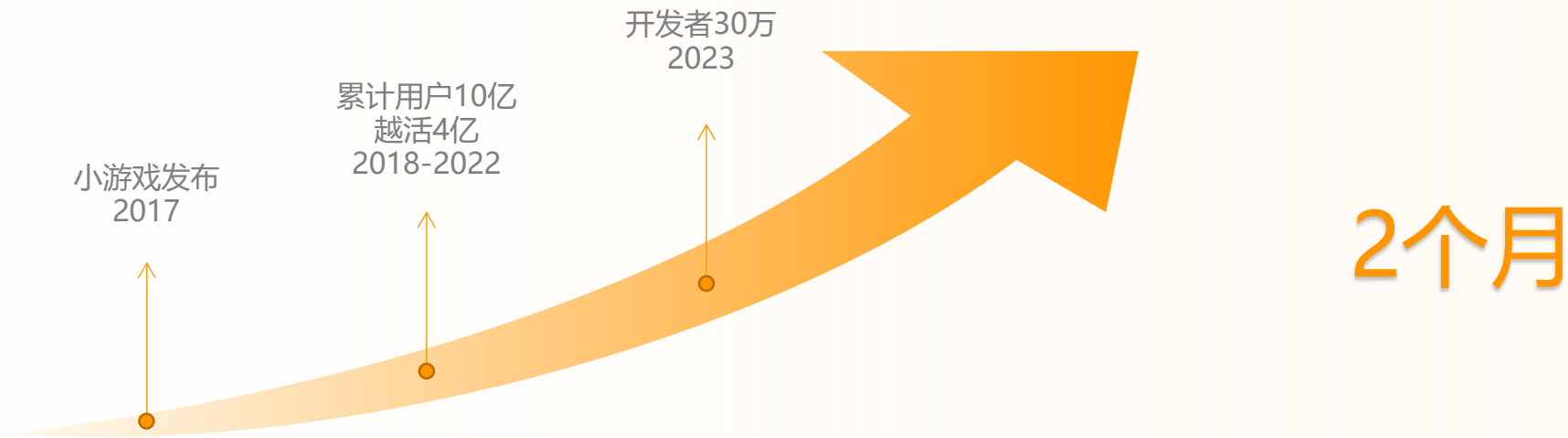


王末
三七游戏客户端技术总监



技术背景

市场扩大



生态成熟

<https://github.com/wechat-miniprogram/minigame-unity-webgl-transform>

引擎支持

Unity 2021 编译更快, 体积更小、ASTC支持、压缩音频支持

Living happily, gaming seriously.

如何在2个月内搞定斗罗小游戏



探查环境

兼容环境
合作方关注点
调试环境



锁定敌军

资源转换
生态兼容
入场速度
内存
脚本性能



全军出击

资源转换平台 (模型、UI、特效)
WebSocket、加载框架、声音等
拆分、收集 workflow, 登陆简化
结构体dump工具, 缓存策略
框架迭代, 配置迭代
最后去给策划和服务端大大磕一个

WebGL

《永恒纪元》
WebGl1.0。2.0在IOS高性能
模式下兼容性79%
空间转换 (Linear To
Gamma)

IOS

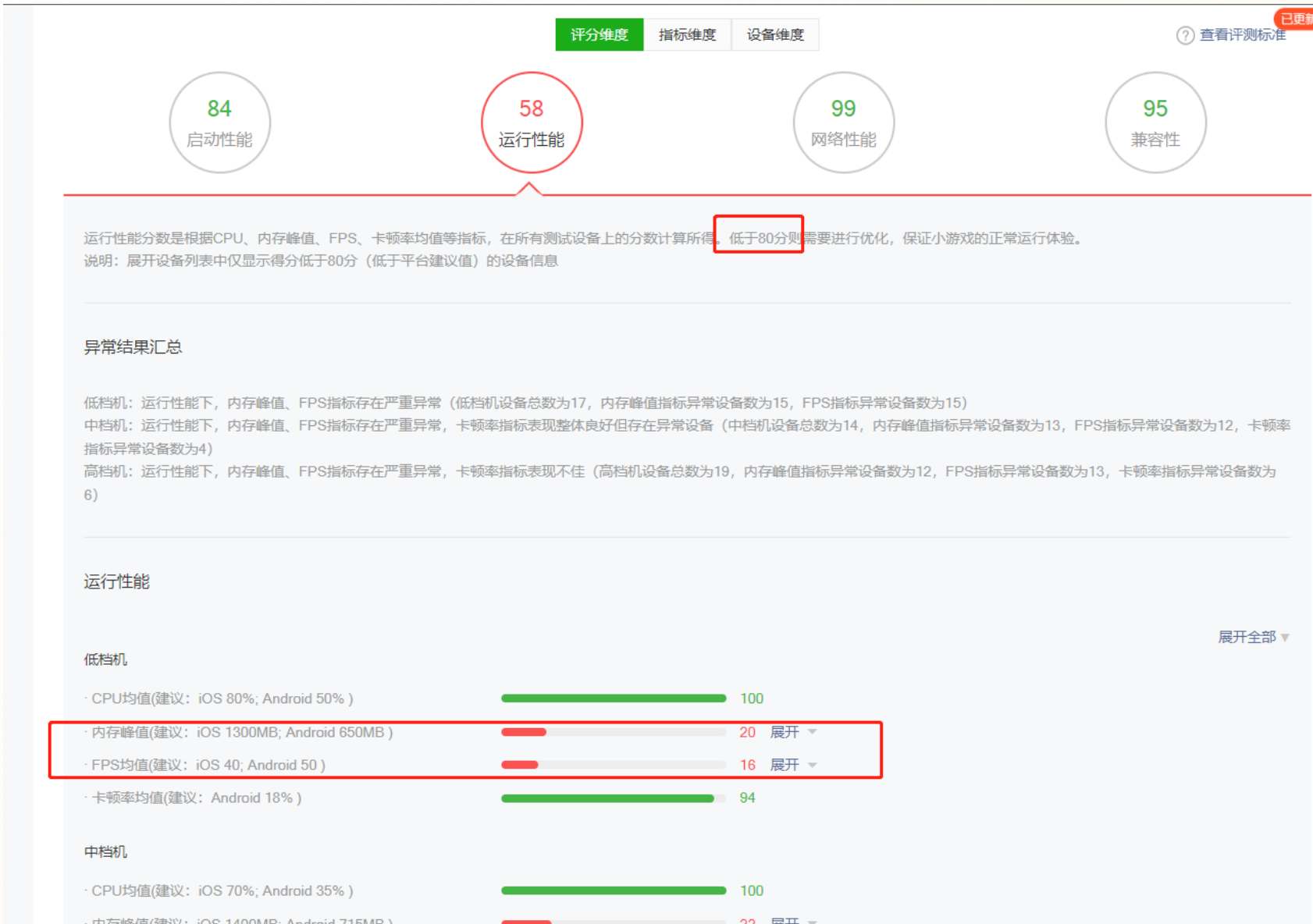
高性能模式 (WASM JIT)
内存控制1G

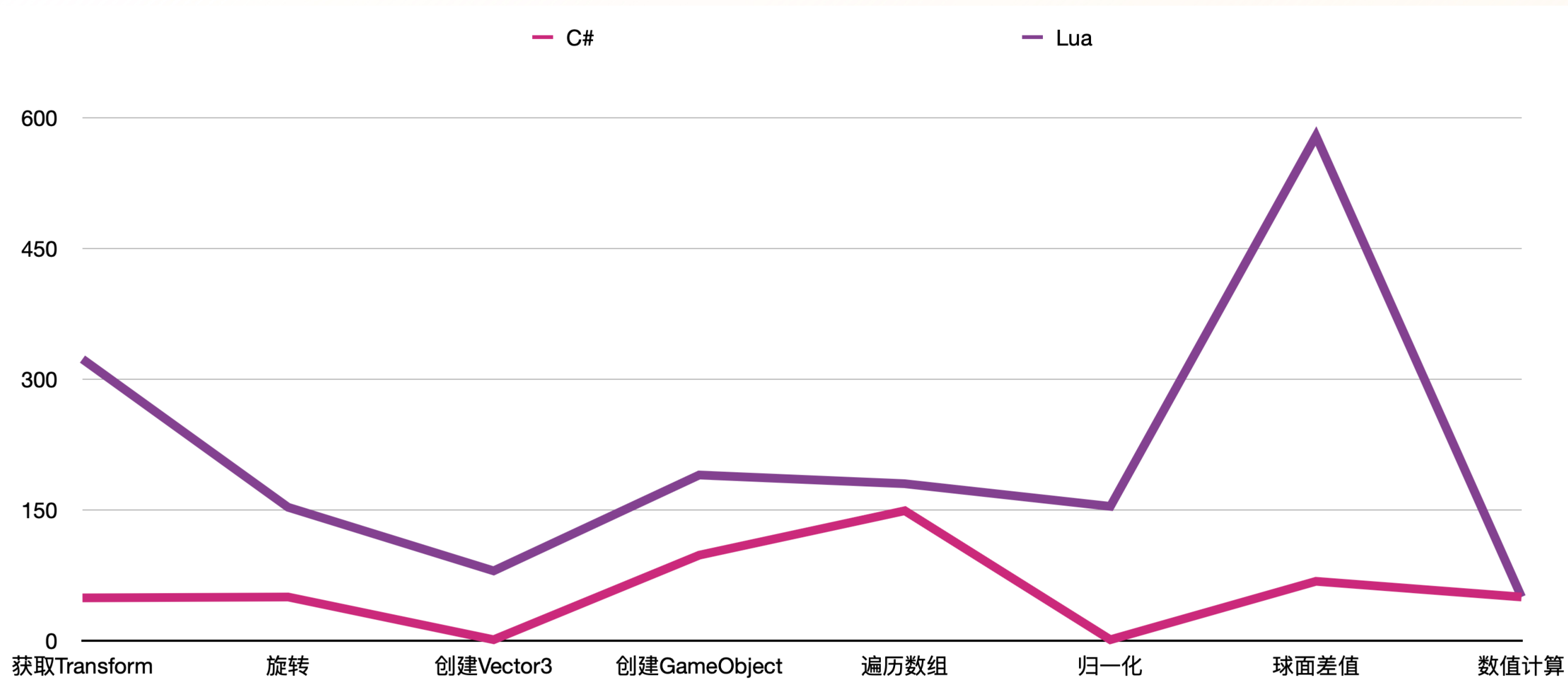
纹理压缩

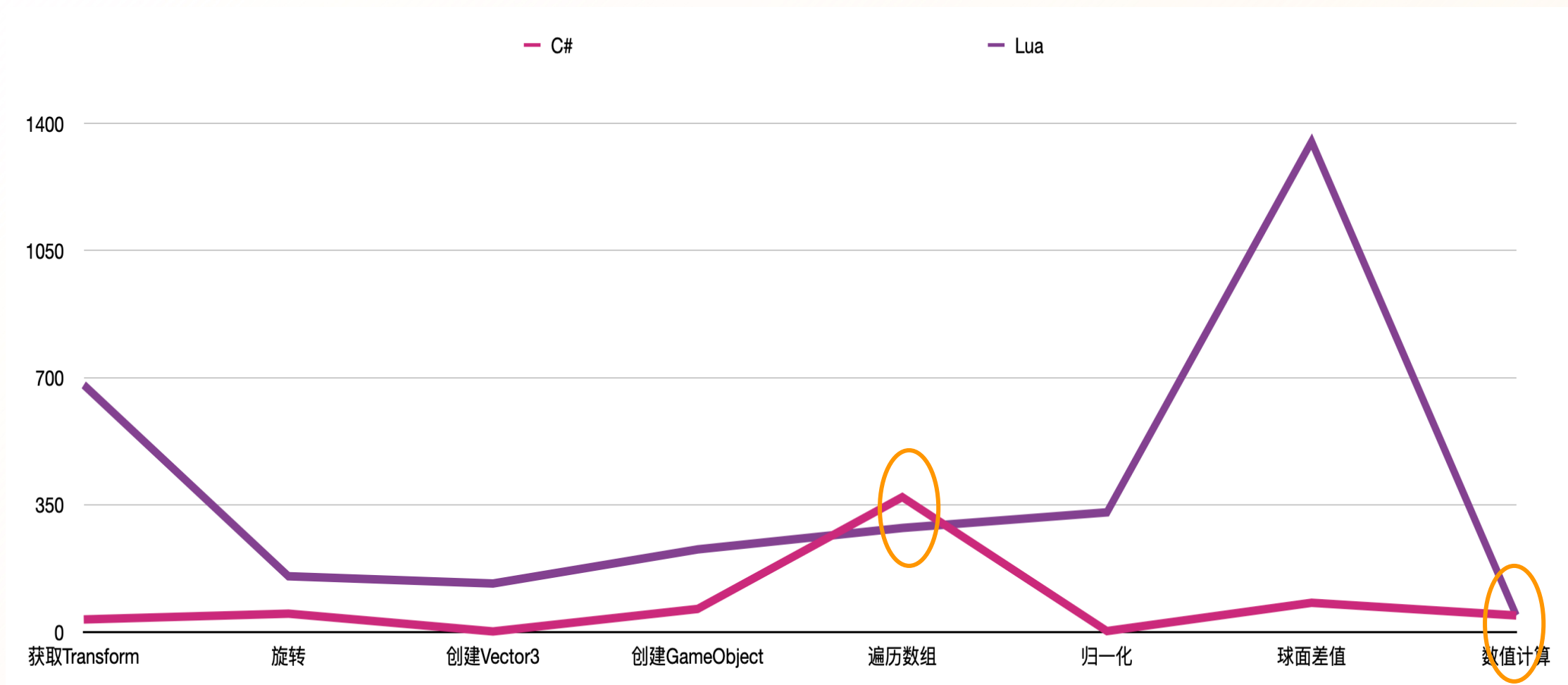
ASTC
RGBA QuarterRes

引擎支持

音频
网络WebSocket
多线程
文件系统







CPUProfile

调试编译选项

- Development Build
- Profiling Funcs
- Autoconnect Profiler
- Profiling Memory
- Scripts Only Build

The screenshot displays the Chrome DevTools Performance tab. The top bar shows a timeline from 5000ms to 35000ms. The main area shows a call stack with various functions like 'Browser_mainLoop_runner', 'MainLoop()', and 'ExecutePlayerLoop(NativePlayerLoopSystem*)'. A right-hand sidebar menu is open, with '更多工具' (More Tools) and 'JavaScript 探查器' (JavaScript Profiler) highlighted.

调试环境

UnityProfile、Spector.js、PerfDog、云测

```
if(port == 54998)
{
  url = "ws://127.0.0.1:54998"
}
ws = new WebSocketConstructor(url, opts);
ws.binaryType = "arraybuffer";
```

/Applications/Unity/PlaybackEngines/WebGLSupport/BuildTools/Emscripten/node/node
/Applications/Unity/PlaybackEngines/WebGLSupport/BuildTools/websockify/websockify.js 0.0.0.0:54998
localhost:34999 -vv

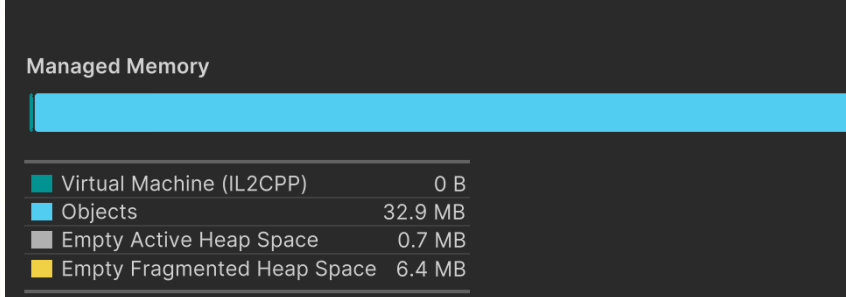
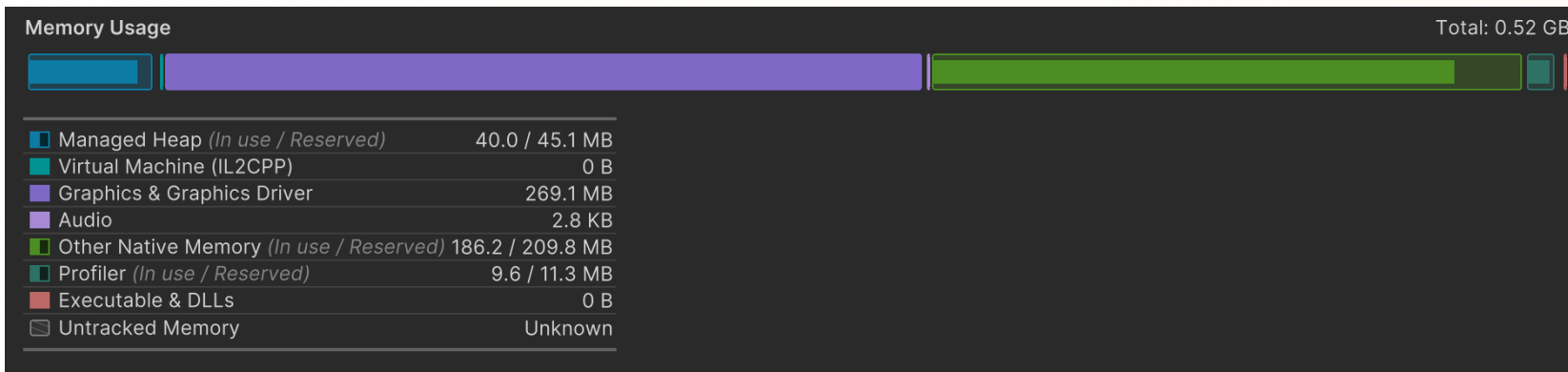
100.0% 共发现问题总量 0 个
严重及严重以上级别的 0 个, 占总问题数比例 0%

| 适配分布 | 测试终端数 | 测试结果百分比 | 级别分布 | 问题数量 | 测试结果百分比 |
|------|-------|---------|------|------|---------|
| 通过 | 100 | 100.0% | 致命 | 0 | 0.0% |
| 未通过 | 0 | 0.0% | 严重 | 0 | 0.0% |
| 未测试 | 0 | 0.0% | 一般 | 0 | 0.0% |
| | | | 提示 | 0 | 0.0% |
| | | | 建议 | 0 | 0.0% |

| 问题分布 | 问题数量 | 测试结果百分比 |
|------|------|---------|
| 问题类型 | | |

| 问题列表 | | | | | |
|------|------|----|----------|----------|--------|
| 失败原因 | 失败描述 | 级别 | 涵盖手机 (台) | 出现次数 (次) | 影响人群 (|

调试环境



Type: Count: 3 Total Sizes: 359.7 MB (Same) + 196.1 MB (New) - 23.2 MB (Deleted) = 382.9 MB (old) 0.5

| Name | Size | Refer | Value |
|----------------------------------|----------|--------|--------|
| | 359.7 MB | 401016 | |
| | 196.1 MB | 518140 | |
| | 161.8 MB | 94095 | |
| Texture2D (296) | 120.9 MB | 1673 | |
| AnimationClip (265) | 20.3 MB | 530 | |
| AnimationClip skill_20 | 0.5 MB | 2 | 0x0000 |
| AnimationClip ani_eff_lyc0105_01 | 0.5 MB | 1 | 0x0000 |
| AnimationClip skill_20 | 405.1 KB | 2 | 0x0000 |
| AnimationClip skill_02 | 312.5 KB | 2 | 0x0000 |
| AnimationClip skill_02 | 312.5 KB | 2 | 0x0000 |
| AnimationClip skill_04 | 300.4 KB | 2 | 0x0000 |
| AnimationClip skill_04 | 300.4 KB | 2 | 0x0000 |
| AnimationClip skill_04 | 300.4 KB | 2 | 0x0000 |
| AnimationClip skill_01 | 272.3 KB | 2 | 0x0000 |
| AnimationClip skill_01 | 272.2 KB | 2 | 0x0000 |
| AnimationClip skill_01 | 268.0 KB | 2 | 0x0000 |
| AnimationClip skill_05 | 239.1 KB | 2 | 0x0000 |
| AnimationClip skill_01_1 | 223.0 KB | 2 | 0x0000 |
| AnimationClip skill_05 | 219.6 KB | 2 | 0x0000 |
| AnimationClip skill_05 | 219.6 KB | 2 | 0x0000 |
| AnimationClip skill_05 | 219.6 KB | 2 | 0x0000 |
| AnimationClip skill_02 | 217.8 KB | 2 | 0x0000 |
| AnimationClip skill_05 | 215.6 KB | 2 | 0x0000 |
| AnimationClip start | 214.1 KB | 2 | 0x0000 |

Details

- UnityEngine.AnimationClip "skill_04"
- AnimatorController "con_s_xieyue"

Selection Details

"skill_04" UnityEngine.AnimationClip : AnimationClip

Select in Editor Search In Project Open in Search

Basic

Size : 300.4 KB (300.4 KB Native + 16 KB Managed)

Referenced By : 2 (1 Native + 1 Managed) + 2 Self

Status : Used Loaded Asset

Help

This is an Asset that is used by something in your Application. You should expect to see this Asset at this point in your application. Check the References panel to see what is using it. If you expect the Asset's Import settings.

Self References : The Managed and Native parts of the Asset.

找准目标，一击制敌



资源转换

workflow无缝衔接
魂师线性空间资源一键导入小游戏



生态兼容

Unity转小游戏文档中的那些事



闪电进入

Movie Mode Design
极致的原生化



内存

脚本dump神器
缓存策略调整



运行时性能

生门已开，全速冲击
通信框架修改，做极致的页游



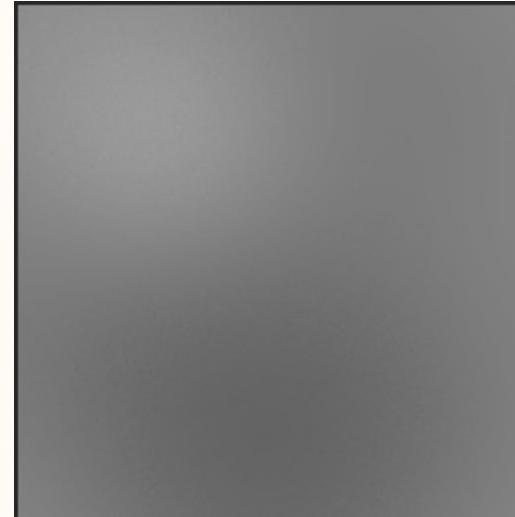
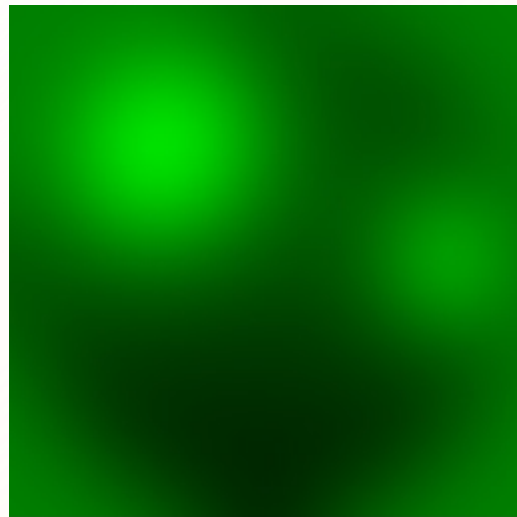
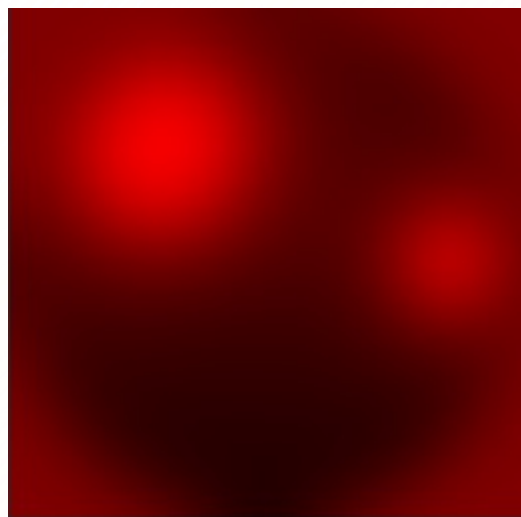
鼓励队友

配置结构调整
重度任务分压

资源-角色

角色: $0.5s \times 2.4m/s = 1.2m = 400kb + 800kb$

场景: $4s \times 2.4m/s = 9.6m = 6 \times 1.2m + 3.4m$



```
half index = floor(mip);
half curVal = dot(capTex, half4(saturate(1 - index), saturate(2 - index) * index,
    saturate(index - 1) * saturate(3 - index),
    saturate(index - 2)));
half indexNext = index + 1;
half nextVal = dot(capTex, half4(saturate(1 - indexNext),
    saturate(2 - indexNext) * indexNext, saturate(indexNext - 1) * saturate(3 - indexNext),
    saturate(indexNext - 2)));
half lerpVal = lerp(curVal, nextVal, mip - index);
```


角色

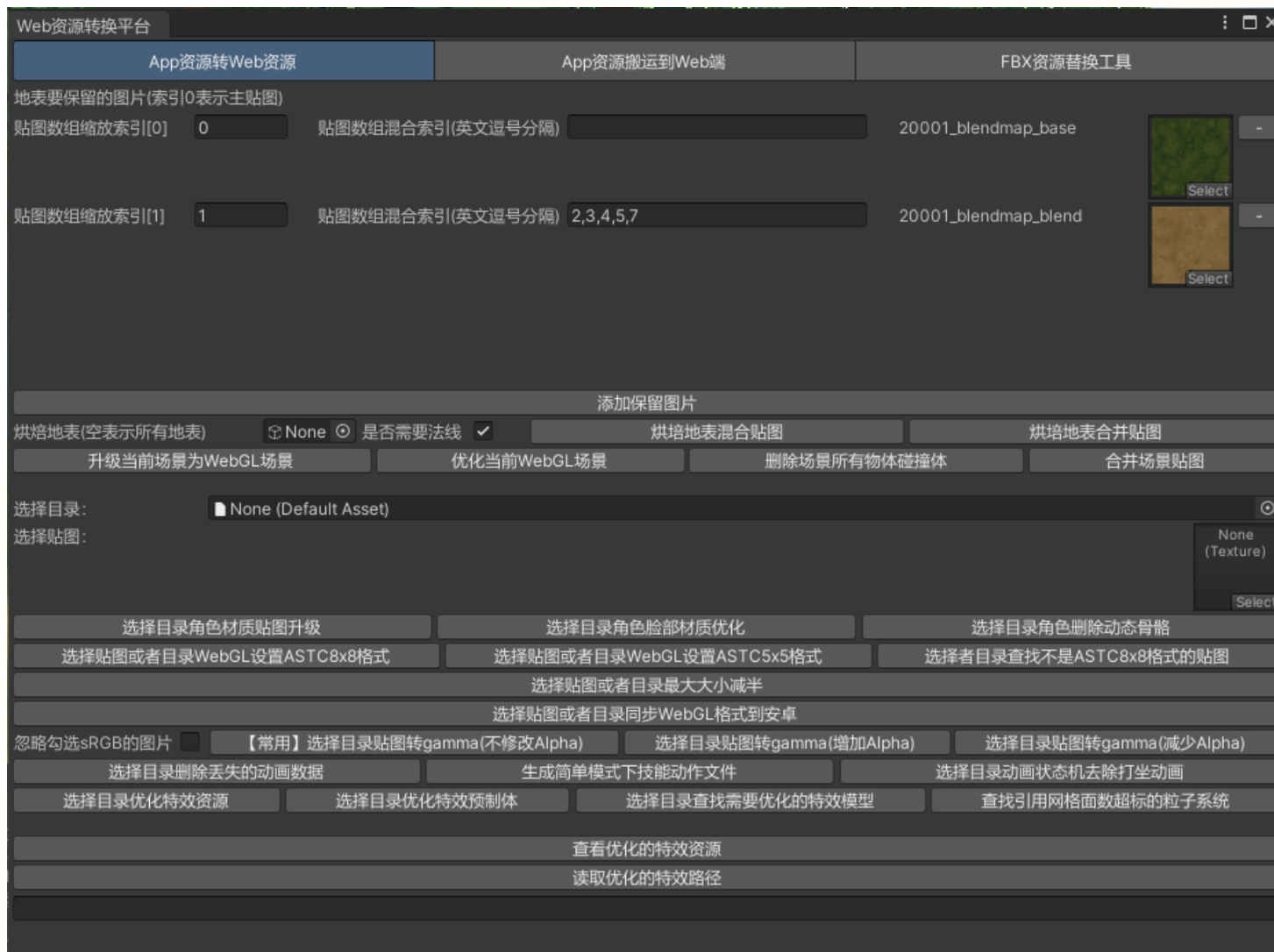


保留高光、反射，去除环境光部分，GPU
消耗降低70%

去除面部骨骼

APP的LOD1





删除Dir、合并shadowmask

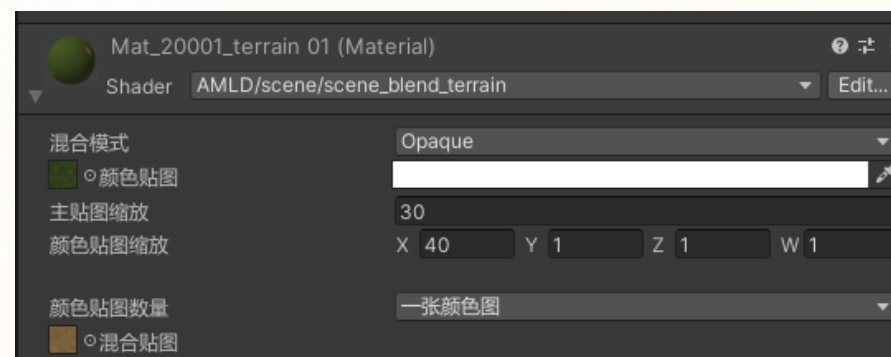
光照、贴图简化

地表贴图合并、mask图合并

水保留高光、反射

天空盒使用Cubemap

场景



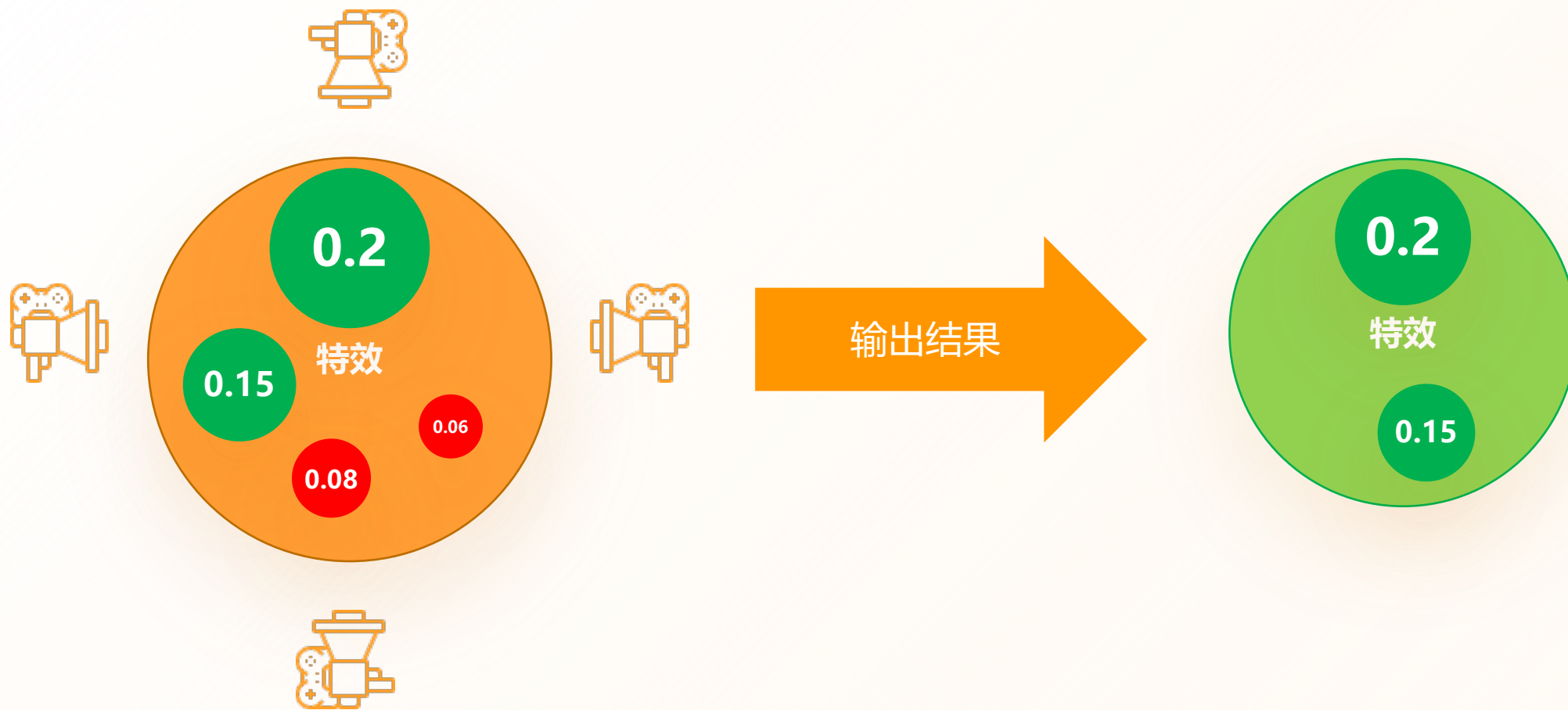
线性空间UI转换

$$\text{togamma}((\alpha * \text{Color}(B) + (1 - \alpha) * \text{Color}(A))) = \alpha' \text{togamma}(\text{Color}(B)) + (1 - \alpha') \text{togamma}(\text{Color}(A))$$

↓
Color(67, 67, 67)



CS的特效剔除



CS特效剔除

```
[unroll]
for (uint ix = GROUPSIZE >> 1; ix > 0; ix = ix >> 1)
{
    if (gtidx < ix)
    {
        accumulatorR[gtidx] = (accumulatorR[gtidx] + accumulatorR[gtidx + ix]);
        accumulatorG[gtidx] = (accumulatorG[gtidx] + accumulatorG[gtidx + ix]);
        accumulatorB[gtidx] = (accumulatorB[gtidx] + accumulatorB[gtidx + ix]);
    }
    GroupMemoryBarrierWithGroupSync();
}

if (gtidx != 0) return;

InterlockedAdd(_Output[0], accumulatorR[0]);
InterlockedAdd(_Output[1], accumulatorG[0]);
InterlockedAdd(_Output[2], accumulatorB[0]);
```

CS特效剔除



打开特效统计场景

单个统计 | 批量统计 | **检验与执行** | 数据处理

检验:
检验数据集: 特效影响力统计数据2 (Effect Reduce Data)
当前数据集中共有 1 个特效, 当前显示第 0 个。(从索引0开始)

特效预制体: pre_eff_glsg0605_03
权重阈值(小于则标红): 0.1

| | | |
|------------------------|---------------|--------------------------|
| mod_eff_xlzw0205_03_03 | 权重:1 | <input type="checkbox"/> |
| mod_eff_xlzw0205_03_04 | 权重:0.5741015 | <input type="checkbox"/> |
| par_eff_glsg0605_03_01 | 权重:0.2622078 | <input type="checkbox"/> |
| par_eff_glsg0605_03_02 | 权重:0.2221932 | <input type="checkbox"/> |
| par_eff_glsg0605_03_03 | 权重:1 | <input type="checkbox"/> |
| par_eff_glsg0605_03_04 | 权重:0.06797407 | <input type="checkbox"/> |
| par_eff_glsg0605_03_05 | 权重:0.06464528 | <input type="checkbox"/> |
| par_eff_glsg0605_03_11 | 权重:0.6100906 | <input type="checkbox"/> |
| par_eff_glsg0605_03_13 | 权重:0.5037019 | <input type="checkbox"/> |
| par_eff_glsg0605_03_14 | 权重:0.3110929 | <input type="checkbox"/> |
| par_eff_glsg0605_03_15 | 权重:0.5058196 | <input type="checkbox"/> |

该特效含有 Animator 组件, 属于动画特效

播放当前特效 | 逐个播放所有特效

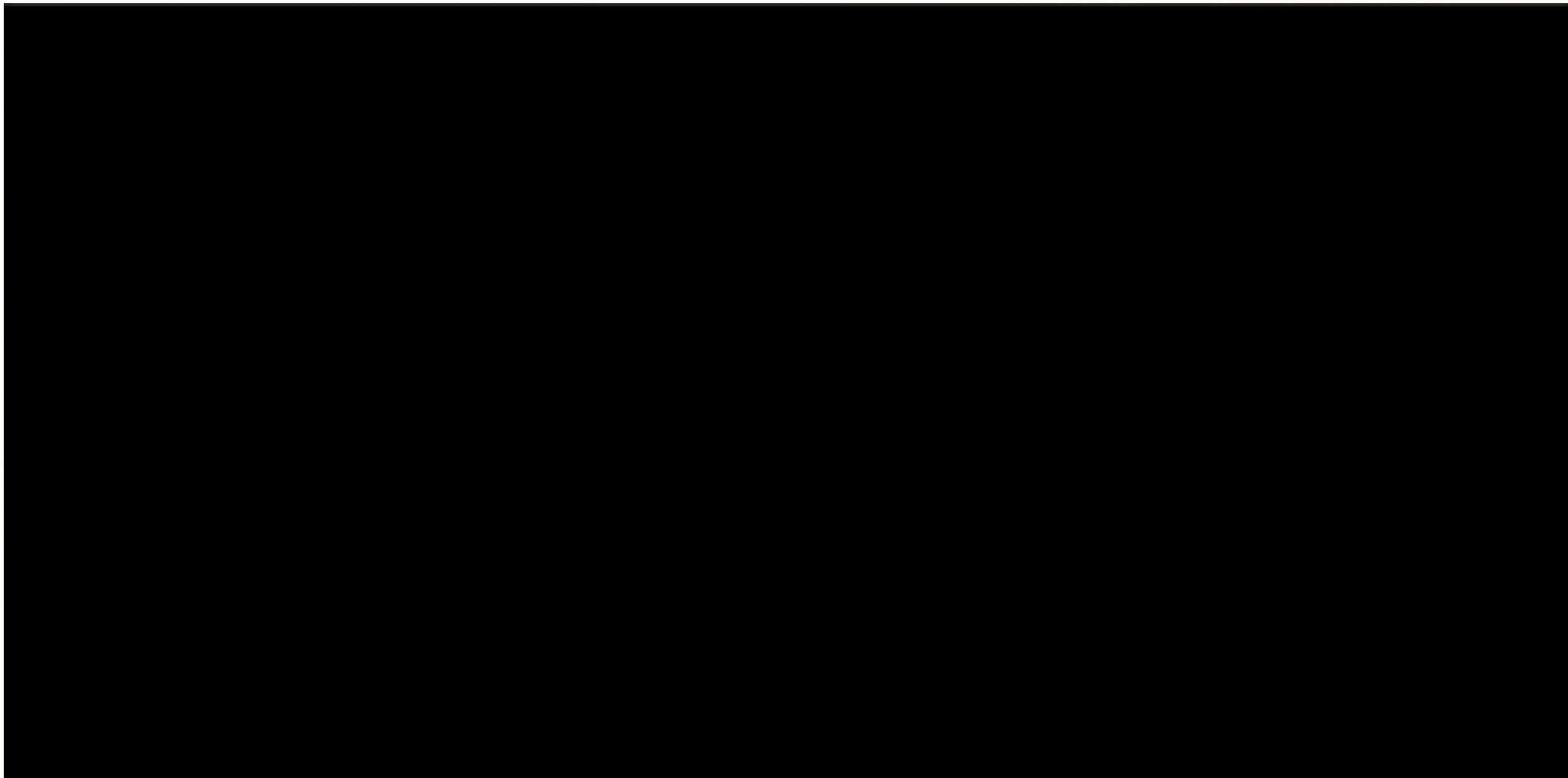
执行:
统一权重阈值: 0.1 | 统一设置权重
移除AnimationClip对应片段

移除当前特效标红物体 | 移除数据集内特效标红物体

特效名: pre_eff_glsg0605_03

| | |
|------------------------|--------------|
| mod_eff_xlzw0205_03_01 | N:0.3626544 |
| mod_eff_xlzw0205_03_02 | N:1 |
| mod_eff_xlzw0205_03_03 | N:1 |
| mod_eff_xlzw0205_03_04 | N:0.5744022 |
| par_eff_glsg0605_03_01 | N:0.2637278 |
| par_eff_glsg0605_03_02 | N:0.2211103 |
| par_eff_glsg0605_03_03 | N:1 |
| par_eff_glsg0605_03_04 | N:0.06799349 |
| par_eff_glsg0605_03_05 | N:0.06462877 |
| par_eff_glsg0605_03_11 | N:0.5959792 |
| par_eff_glsg0605_03_13 | N:0.5036182 |
| par_eff_glsg0605_03_14 | N:0.3285122 |
| par_eff_glsg0605_03_15 | N:0.5086591 |

CS特效剔除



生态兼容

| 能力 | 是否支持 | 解决方案 |
|---------|------|--|
| 渲染管线 | 支持 | BuildIn |
| 资源加载 | 支持 | AssetBundle网络异步加载 |
| 脚本 | 支持 | 非jit |
| Unity音频 | 支持 | wx.wav（2倍速问题） |
| 网络系统 | 需调整 | HTTP使用UnityWebRequest，TCP使用WebSocket通信替代 |
| 渲染接口 | 支持 | 支持WebGL1.0(相当于OpenGLES2.0) |
| 多线程 | 不支持 | 删除多线程用法，使用协程等其他替代方式 |
| 文件API | 需调整 | 小游戏SDK实现文件存储 |

进入-Movie Design Mode (流式设计)



```
▼<configab>
  <config path="luaab/config/audionamelist1" stage="1" timest="2023-06-21 19:29:49" size="612" md5="f9c24386fb2137ab6343b28868a18243"/>
  <config path="luaab/config/audionamelist2" stage="2" timest="2023-07-25 11:07:47" size="6352" md5="33350ee39c5f648924fe0b24d5c3ab45"/>
  <config path="luaab/config/audionamelist3" stage="3" timest="2023-07-25 11:07:47" size="547684" md5="3166c71fd0322aa28bad99cae1462e80"/>
  <config path="luaab/config/config1-1" stage="1" timest="2023-08-22 18:20:15" size="73529" md5="aa213d427c10a33bdaea8ef04df78220"/>
  <config path="luaab/config/config2-1" stage="2" timest="2023-08-22 18:20:15" size="1268887" md5="f43b125cba86bd12fd64bc0a806deb71"/>
  <config path="luaab/config/config3-1" stage="3" timest="2023-08-03 10:41:54" size="3095911" md5="692a71d4747d67099fb854e7aa716410"/>
  <config path="luaab/config/config3-2" stage="3" timest="2023-08-22 18:20:15" size="2955573" md5="39c023237dd67152256b850288aa7b7a"/>
  <config path="luaab/config/config3-3" stage="3" timest="2023-08-22 18:20:15" size="2634852" md5="e496512f8e9fe4977479ffa27251fc6f"/>
  <config path="luaab/config/config3-4" stage="3" timest="2023-07-28 18:56:35" size="3747479" md5="d455d427c9c1fbcd2190e75336d71a9b"/>
  <config path="luaab/config/config3-5" stage="3" timest="2023-07-19 20:40:52" size="1654521" md5="cdf639e3828570747d4f2d44af34f0ba"/>
  <config path="luaab/config/config3-6" stage="3" timest="2023-07-19 20:40:52" size="1081895" md5="459b1f1984b82a96dcf4ec9a26d1d23d"/>
  <config path="luaab/config/config3-7" stage="3" timest="2023-07-19 12:07:34" size="1094740" md5="824dd6100c315e54f6ddefe82c43fa1c"/>
  <config path="luaab/config/config3-8" stage="3" timest="2023-08-22 18:20:15" size="1296347" md5="62cbe44acf020bda7d89a8865522786e"/>
  <config path="luaab/config/confignamelist" stage="1" timest="2023-07-19 12:07:34" size="36627" md5="51e4c2215289bc3d4701d00939623c6e"/>
</configab>
▼<scriptab>
  <script path="luaab/luascript/luascript1-1" stage="1" timest="2023-08-22 18:20:15" size="913760" md5="1ea7d7b95273431f6c4e5120f4ae0b89"/>
  <script path="luaab/luascript/luascript2-1" stage="2" timest="2023-08-22 18:20:15" size="1875638" md5="6abb43e849d7aa17577cb349a014bf08"/>
  <script path="luaab/luascript/luascript3-1" stage="3" timest="2023-08-22 18:20:15" size="4280739" md5="de441141734e5053e6a2ca73e1e52130"/>
  <script path="luaab/luascript/luascript3-2" stage="3" timest="2023-08-22 18:20:15" size="1598454" md5="2d3403179015b6ac890a00203fe0776e"/>
</scriptab>
▼<commonab>
  <common path="luaab/protocol/protocol" stage="1" timest="2023-07-21 11:41:59" size="69011" md5="9a54df02c6bf41bd9a972364904feaef"/>
  <common path="luaab/localization/localization" stage="1" timest="2023-07-20 23:32:38" size="397153" md5="c32ac3021fd3dce26a73f575506bd870"/>
  <common path="common/shader/shaderglobalproperties" stage="1" timest="2023-04-13 01:26:28" size="41059" md5="f22ff81c62d45e8d5ea7f65484a8db6e"/>
  <common path="shader/shader" stage="1" timest="2023-06-20 12:46:40" size="297390" md5="35125cfccdb57e92d4ba373f9843b730"/>
  <common path="uisantu/uisantulist" stage="1" timest="2023-07-19 07:13:00" size="57402" md5="c8d531d4d75db7246cc82b4bb0e517e4"/>
  <common path="common1" stage="1" timest="2023-07-19 07:13:00" size="1244569" md5="068db9fe522a6425dc21044ece52b09a"/>
  <common path="common2" stage="2" timest="2023-04-13 01:26:28" size="1978304" md5="b92754028a9d58794f72f1de6ab27b9c"/>
  <common path="playable/timeLine" stage="2" timest="2023-07-19 07:13:00" size="1590856" md5="2ef32ee81254269ed1073f6fbaabeb15"/>
  <common path="commontex/commonmapstex" stage="2" timest="2023-07-19 07:13:00" size="564653" md5="f3d32c290cfafaef2938127054672e2f"/>
  <common path="commontex/commonmodeltex" stage="2" timest="2023-06-20 12:46:40" size="24547" md5="a5f18bb95ed070d2cc14978c3760e34b"/>
  <common path="commontex/commoneffecttex" stage="2" timest="2023-06-20 12:46:40" size="933757" md5="a571a53d21ab2a0d3dbeae0282fa5b90"/>
  <common path="atlas/face" stage="2" timest="2023-07-19 07:13:00" size="716493" md5="248afdd259041aa5e4d228a9adec1178"/>
</commonab>
```


配置收集

输出结构:

```

break.txt
4 q_awake_activity,13;72;45;41;75;8;74;7;1;6;71;32;5;76;47;
5 q_awakticket_jump,14;2;5;12;11;4;18;17;16;8;13;3;7;1;15;
6 q_battle,1101102;1000101;1101201;2990001;2991001;2992001;
7 q_battle_type,31;114;115;56;1;63;28;62;120;61;14;122;29;
8 q_bless_share,3;1
9 q_buff,20080301
10 q_buff_type_performance,30002
11 q_button_sort,1;2;3;4;5;11;12;13;14;15;16;19;20;23;24;27;
12 q_card,5017;5012;5013;5001;5004;4045;4033;4012;4026;4010;
13 q_card_appearance,2008001;2009001;3007001;4003001;5001001;

```

| | |
|--|----------|
| config1-1_c665f771691fe346235367150075ab16.assetbundle | 56 KB |
| config2-1_2c0934ca38117ebcf51a459127cf2fca.assetbundle | 1,133 KB |
| config3-1_30e1f33c5aeff7ebb6aa99e224b63b85.assetbundle | 3,053 KB |
| config3-2_ec1984b9b16c84a6cf6db2e1ffc72a2a.assetbundle | 2,895 KB |
| config3-3_0d1aff076c2b522690931c72d0c44994.assetbundle | 2,643 KB |

代码分包路径输出工具 (Alt+R)

启用收集Lua分包

启用收集Lua依赖

Lua配置

配置最大拆分数量

当前配置收集阶段:

导出阶段1配置

导出阶段2配置

启用收集配置Id

导出配置读取顺序

Lua代码

代码最大拆分数量

当前代码收集阶段:

导出阶段1代码

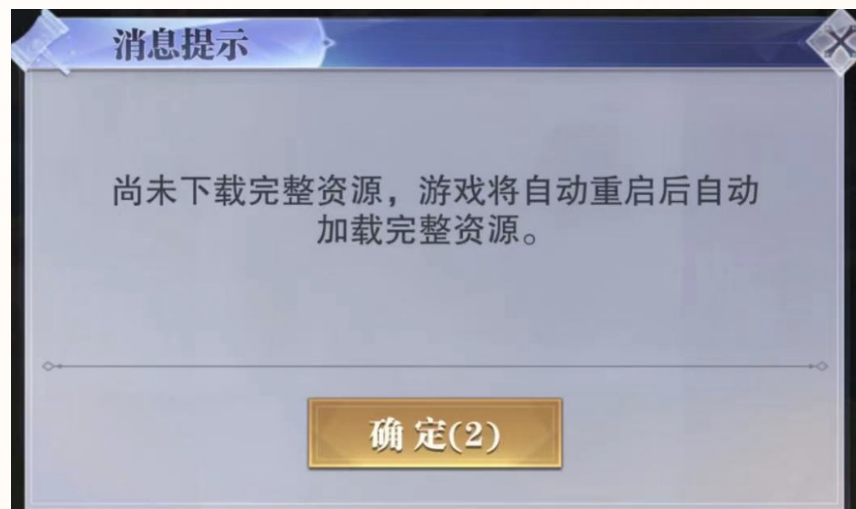
导出阶段2代码

收集

波塞冬:

```
TradeId=ce57ef1aed7e4ad18247511fb06f8753&Uid=2599030884&Log=GetLuaBytes 未找到lua config文件2 path q_item_14 , id : 2009 , traceback : stack  
able' GameSystem/Game/LuaConfig/ConfigDB/ItemConfig:1: in function 'GetitemInfo' GameSystem/UI/Task/View/TaskItemInfo:1: in function 'RefreshE  
em/UI/Task/View/TaskPanel:1: in function 'RefreshPanel' GameSystem/UI/Task/View/TaskPanel:1: in function 'InitData' GameSystem/UI/Task/View/Ta  
on 'setBinderId' Core/UIManager/Component/LuaBehaviour:1: in func...
```

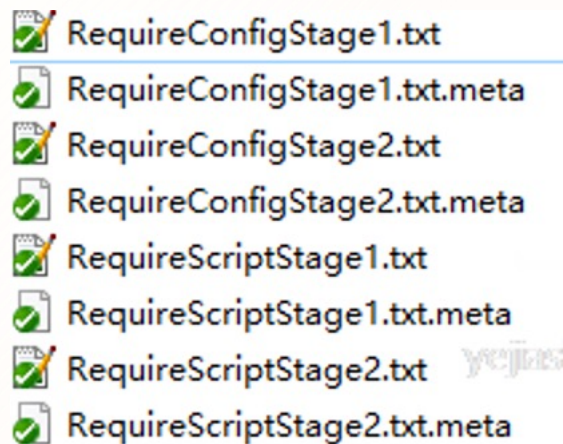
反馈:



脚本收集

- 1.登陆前（加载登陆节目前需要加载完成）
- 2.进主场景（进主场景前需要加载完成）
- 3.通关1-3（通关1-3前需要加载完成）

未通关1-3的新玩家，在进入主场景后通过下载空闲时段加载第三段
已通关1-3的老玩家，在进入主场景前需加载完第三段



| Name | Container | Type | PathID | Size |
|-----------------------------|-----------|---------------|--------|---------|
| UnitySplash-cube | | Texture2D | 10403 | 2796352 |
| UnityWatermark-trial-big | | Texture2D | 10406 | 96376 |
| Hidden/InternalClear | | Shader | 68 | 75140 |
| Capsule | | Mesh | 10208 | 36192 |
| Sphere | | Mesh | 10207 | 33848 |
| UnityWatermark-small | | Texture2D | 10400 | 29812 |
| pSphere1 | | Mesh | 10200 | 26032 |
| polySurface2 | | Mesh | 10205 | 24104 |
| Soft | | Texture2D | 10001 | 21948 |
| GUI/Text Shader | | Shader | 10101 | 21540 |
| EscToExit_back | | Texture2D | 10401 | 21128 |
| Hidden/Internal-Colored | | Shader | 69 | 19528 |
| Hidden/FrameDebuggerRend... | | Shader | 10755 | 19436 |
| Hidden/InternalErrorShader | | Shader | 17 | 17908 |
| EscToExit_Text | | Texture2D | 10402 | 10792 |
| GameSkin | | MonoBehaviour | 11000 | 8488 |
| WarningSign | | Texture2D | 10411 | 8300 |
| pPlane1 | | Mesh | 10204 | 7408 |
| Plane | | Mesh | 10209 | 7408 |
| pCylinder1 | | Mesh | 10203 | 6836 |
| UnitySplash-cube | | Sprite | 10404 | 6696 |
| Cylinder | | Mesh | 10206 | 5808 |
| UnityWatermark-edu | | Texture2D | 10409 | 5148 |
| UnityWatermark-beta | | Texture2D | 10408 | 4436 |
| UnityWatermark-dev | | Texture2D | 10410 | 4028 |
| UnityWatermark-proto | | Texture2D | 10413 | 2380 |
| UnityWatermarkPlugin-beta | | Texture2D | 10414 | 2368 |
| UnityWatermark-trial | | Texture2D | 10407 | 2244 |
| Icosphere | | Mesh | 10211 | 1892 |
| Cube | | Mesh | 10202 | 1812 |
| window on | | Texture2D | 11022 | 1028 |
| window | | Texture2D | 11023 | 1024 |
| icosahedron | | Mesh | 10212 | 812 |
| button active | | Texture2D | 11002 | 688 |
| horizontal scrollbar | | Texture2D | 11008 | 656 |

Preview Dump

```
Width: 2048  
Height: 1024  
Format: DXT5  
Filter Mode: Trilinear  
Anisotropic level: 16  
Mip map bias: 0  
Wrap mode: Clamp  
Channels: BGRA
```

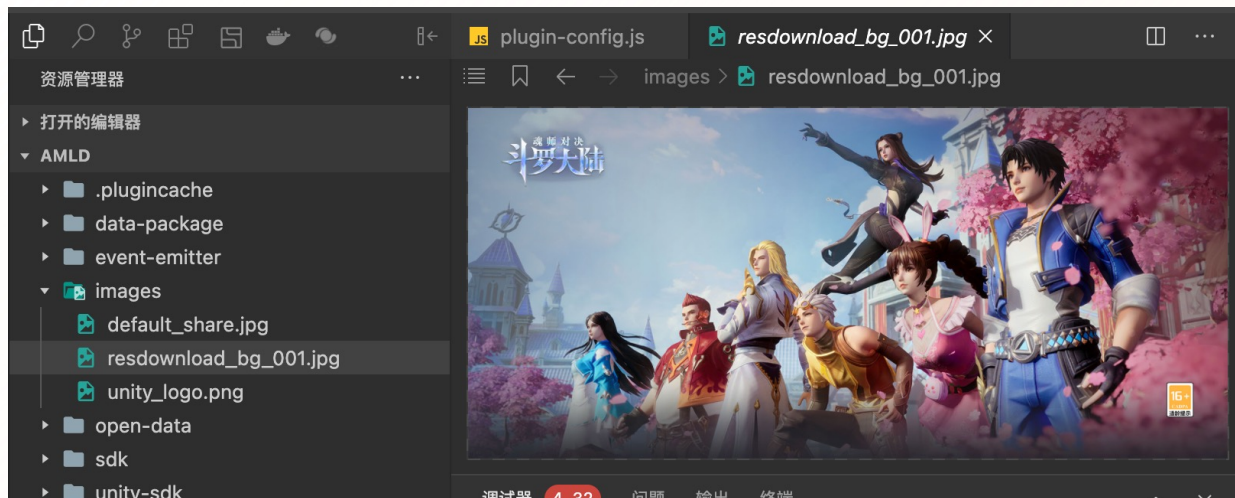
MADE WITH Unity®

'Ctrl'+R/'G'/'B'/'A' for Channel Toggle

| | | | | |
|--|------------------------------|-----------------|----|----------|
| | unity_default_resources | 2023/5/22 10:49 | 文件 | 705 KB |
| | unity_default_resources(old) | 2023/6/12 10:59 | 文件 | 3,440 KB |

首包减负

Loading复用:



```
byte[] bytes = WX.GetFileSystemManager().ReadFileSync(texName);
if (bytes != null && bytes.Length > 0)
{
    Texture2D tex2D = new Texture2D(2, 2);
    tex2D.LoadImage(bytes);
    Texture texture = tex2D as Texture;
}
```

首包减负

依赖文件自定义二进制:

| | | | |
|---|-----------------|-----------------|----------|
| ab | 2023/6/26 16:57 | 文件 | 1,570 KB |
| ↓ | | | |
| ab_50dd29770b65193f539e627b5eb617f8.assetbundle | 2023/6/26 16:58 | ASSETBUNDLE ... | 1,150 KB |

脚本简化:

```
ActivityRewardItem.txt
1 local a=require"class"local b={}local c=require"Core.UIManager.Component.LuaUIBehaviour"local d=requi
```

wasm分包工具, 删除库、引擎极致原生化

| | | | |
|---|------------------|--------|----|
| 66e8d75c961a996d.webgl.wasm.code.unityweb.wasm.br | 2023年7月20日 14:57 | 3.2 MB | 文稿 |
|---|------------------|--------|----|

首场景



场景3渲2

角色高级序列帧

内存-维稳

Runtime Check:



InstanceHook:

```
GameObject.Instantiate(UnityEngine.Object original)  
AssetBundle.Unload(true)
```

| | |
|--|---|
| | Snapshot-638180436 2023-04-25 18:20:14 0.52 GB 0.52 GB |
| | Snapshot-638180437 2023-04-25 18:21:42 0.71 GB 0.71 GB |
| | Snapshot-638180438 2023-04-25 18:24:31 0.93 GB 0.93 GB |
| | Snapshot-638180441 2023-04-25 18:28:45 0.81 GB 0.81 GB |
| | Snapshot-638180442 2023-04-25 18:30:08 1.01 GB 1.01 GB |
| | Snapshot-638180444 2023-04-25 18:33:25 0.92 GB 0.92 GB |
| | Snapshot-638180449 2023-04-25 18:41:48 0.85 GB 0.85 GB |
| | Snapshot-638180452 2023-04-25 18:46:37 0.96 GB 0.96 GB |
| | Snapshot-638180455 2023-04-25 18:51:35 1.07 GB 1.07 GB |

| 行号 | 文件路径 | 文件大小 | 执行次数 | 总数 |
|----|--|----------|------|----------|
| 1 | GameSystem/UI/Mall/Model/ShopGoodsData | 74.79KB | 337 | 19.21MB |
| 2 | GameSystem/UI/CardBag/Model/CardInfo | 162.88KB | 51 | 8.11MB |
| 3 | GameSystem/UI/SoulRing/Model/SoulRingSlotData | 7.56KB | 765 | 5.65MB |
| 4 | GameSystem/UI/SoulBone/Model/SoulBoneInfo | 27.31KB | 117 | 1.84MB |
| 5 | GameSystem/Game/Message/currency/CurrencyInfo | 2.12KB | 732 | 1.52MB |
| 6 | GameSystem/Game/Message/soulroad/ResSoulRoadSectionTimes | 3.65KB | 232 | 846.89KB |
| 7 | GameSystem/UI/Activity/Model/ActivitySituationData | 6.06KB | 98 | 594.03KB |
| 8 | GameSystem/UI/SoulRing/Model/SoulRingBagData | 22.88KB | 230 | 571.88KB |
| 9 | GameSystem/UI/HeadUI/View/NpcHeadUI | 89.14KB | 7 | 534.83KB |
| 10 | Core/UIManager/Manager/UIDeclare | 315.40KB | 1 | 315.40KB |
| 11 | GameSystem/UI/GodWayThree/Model/StrengthBodyItemInfo | 13.15KB | 47 | 302.35KB |
| 12 | GameSystem/Common/Util/GameUtil | 202.25KB | 1 | 202.25KB |
| 13 | Core/Battle/Entity/Manager/BattleUnitMgr | 147.02KB | 3 | 147.02KB |
| 14 | Core/Battle/Entity/View/Npc/NpcView | 143.21KB | 6 | 143.21KB |
| 15 | GameSystem/UI/TownMessage/Manager/TownMessageMgr | 140.51KB | 2 | 140.51KB |
| 16 | Core/UIManager/Manager/Window | 139.10KB | 1 | 139.10KB |
| 17 | Core/Battle/Entity/View/BattleUnit/BattleUnitView | 125.25KB | 1 | 125.25KB |
| 18 | GameSystem/Game/LuaConfig/ConfigDB/CardConfig | 114.14KB | 2 | 114.14KB |
| 19 | GameSystem/UI/SoulBone/Model/SoulBoneCollectionInfo | 1.80KB | 63 | 113.57KB |
| 20 | Core/Scene/Manager/SceneMgr | 113.28KB | 2 | 113.28KB |
| 21 | GameSystem/UI/Mall/Model/MallIdData | 8.30KB | 20 | 107.88KB |
| 22 | Core/Battle/Skill/Manager/PresentationMgr | 97.64KB | 2 | 97.64KB |
| 23 | GameSystem/Game/Battle/Manager/PreLoadMgr | 93.04KB | 2 | 93.04KB |
| 24 | GameSystem/UI/DailyTask/Model/DailyTaskData | 2.78KB | 60 | 83.41KB |
| 25 | GameSystem/Game/Message/currency/CurrencyConsumptionInfo | 2.33KB | 33 | 76.76KB |
| 26 | Core/Battle/Entity/Model/BattleUnit/BattleUnit | 73.37KB | 1 | 73.37KB |
| 27 | GameSystem/UI/Email/Model/EmailData | 1.90KB | 37 | 70.31KB |
| 28 | Core/Main/LuaInitializer | 68.59KB | 1 | 68.59KB |
| 29 | GameSystem/Game/Battle/Manager/BattleResVoMgr | 67.72KB | 2 | 67.72KB |
| 30 | Core/Sound/Manager/WwiseMgr | 65.73KB | 2 | 65.73KB |
| 31 | GameSystem/Game/Throttle/Model/ThrottleHandler | 1.45KB | 42 | 60.74KB |
| 32 | GameSystem/UI/Bag/View/RewardItemView | 57.67KB | 21 | 57.67KB |
| 33 | Core/Battle/Entity/Manager/EntityMgr | 57.65KB | 3 | 57.65KB |
| 34 | Core/Battle/Skill/PresentationDirector | 56.61KB | 2 | 56.61KB |

Hook数据结构创建 (卸载)

二八原则

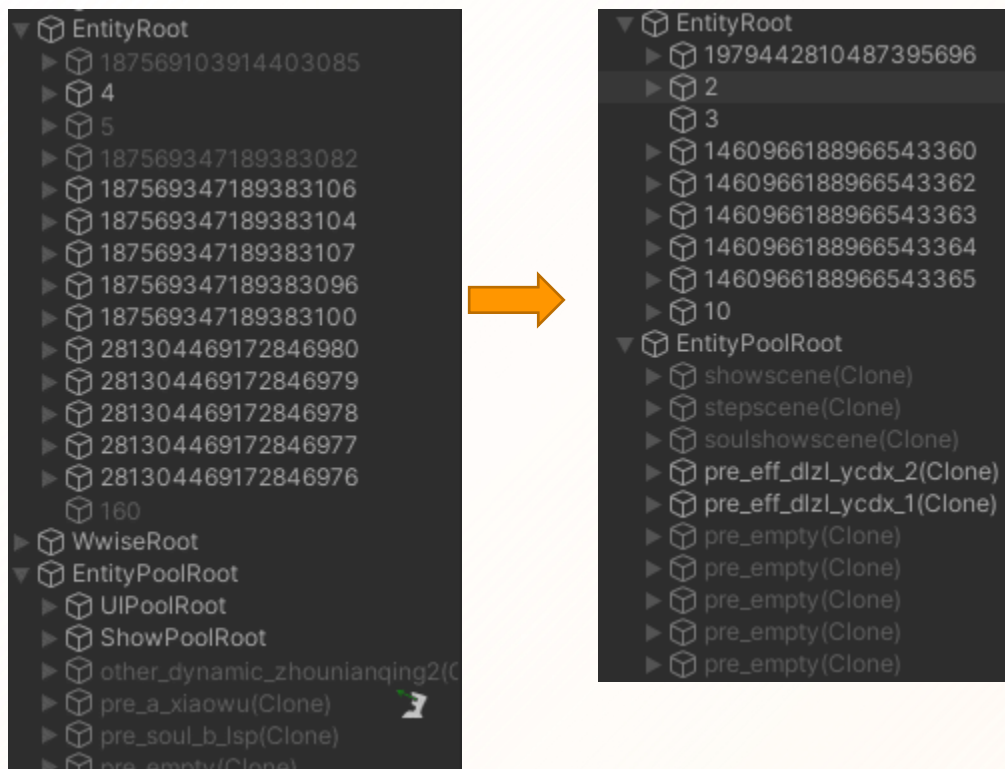
配置表压缩

LZ4 + 稀疏矩阵

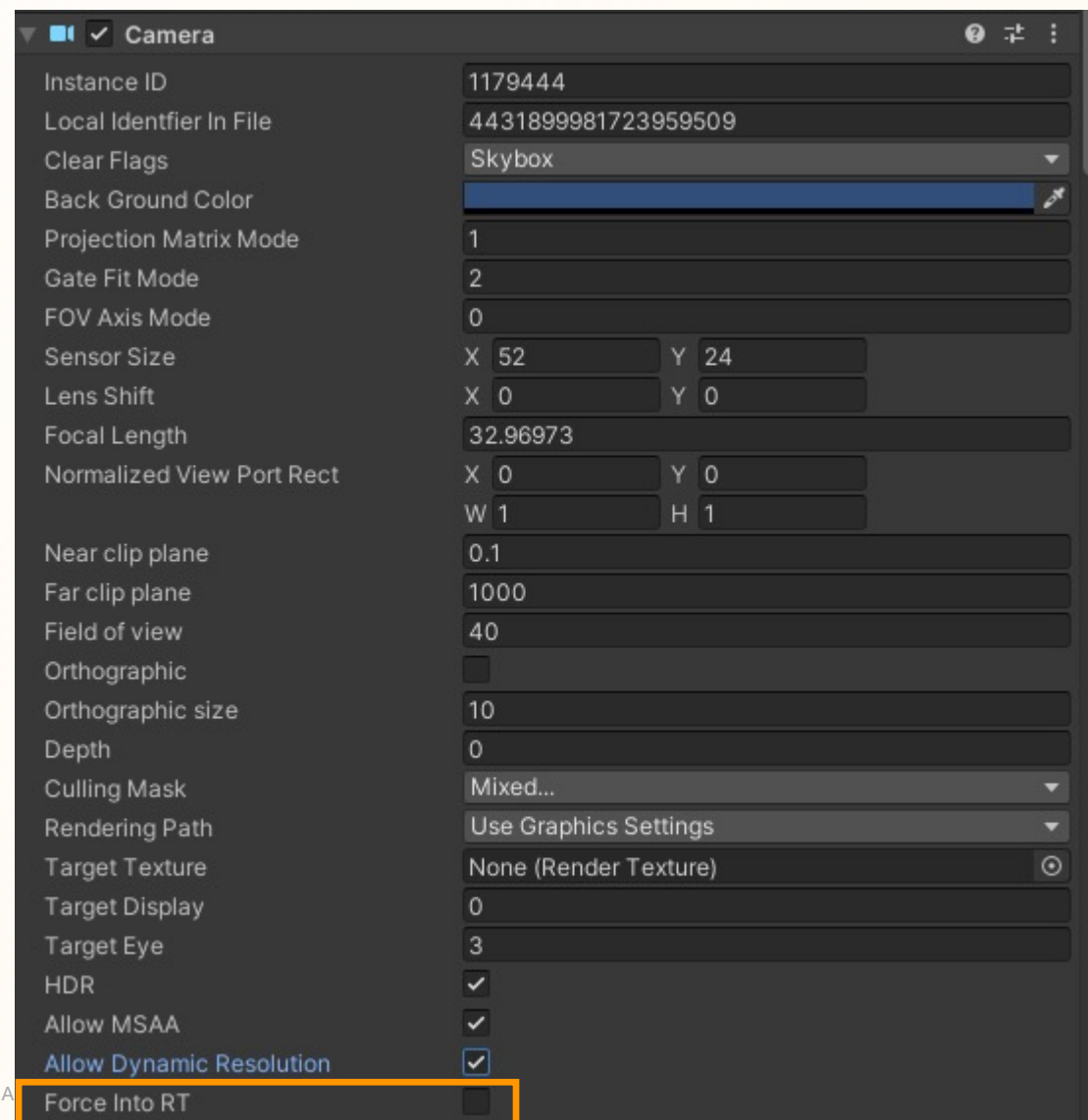
| | | | | |
|----------|----|-----------|-------|--|
| 50170250 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170249 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170248 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170247 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170246 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170245 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170244 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170243 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170242 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170241 | 虎视 | 幽冥形态普攻2单攻 | 51000 | 幽冥白虎敌方单体造成#s攻击力的伤害,队友使用普攻时幽冥白虎有40%概率[协战] |
| 50170240 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [582001104] = sm({vi[53],582001104,j[985],j[2],d[407],d[406]}, mt), |
| 50170239 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [582001105] = sm({vi[107],582001105,d[6],j[2]}, mt), |
| 50170238 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [582001106] = sm({vi[107],582001106,d[408],j[2]}, mt), |
| 50170237 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [582001107] = sm({vi[107],582001107,'7',j[2]}, mt), |
| 50170236 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [582001108] = sm({vi[107],582001108,'8',j[2]}, mt), |
| 50170235 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [585001001] = sm({585001001,'18888',j[222],j[2],0000000001101,00058500199999}, m), |
| 50170234 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [585001101] = sm({585001101,'6',j[222],j[2],0000000001102,00058500199999}, m), |
| 50170233 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [585001102] = sm({585001102,'30',j[209],j[2],0000000001102,00058500199999}, m), |
| 50170232 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [585001103] = sm({585001103,'100',j[187],j[2],0000000001102,00058500199999}, m), |
| 50170231 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [500001201] = sm({vi[23],500001201,d[179],j[986],j[2],d[409]}, mt), |
| 50170229 | 虎视 | 幽冥形态普攻2单攻 | 51000 | [500001202] = sm({vi[22],500001202,d[255],j[987],j[2],d[409]}, mt), |
| 50170228 | 虎视 | 幽冥形态普攻2单攻 | 48702 | [500001203] = sm({vi[22],500001203,d[9],j[988],j[2],d[409]}, mt), |
| 50170227 | 虎视 | 幽冥形态普攻2单攻 | 46508 | [500001204] = sm({vi[22],500001204,'4_7',j[989],j[2],d[409]}, mt), |
| | | | | [500001205] = sm({vi[22],500001205,'8_15',j[990],j[2],d[409]}, mt), |
| | | | | [500001206] = sm({vi[22],500001206,'16_30',j[991],j[2],d[409]}, mt), |
| | | | | [500001207] = sm({vi[22],500001207,'31_50',j[992],j[2],d[409]}, mt), |
| | | | | [500001208] = sm({vi[22],500001208,'51_75',j[993],j[2],d[409]}, mt), |
| | | | | [500001209] = sm({vi[22],500001209,'76_100',j[994],j[2],d[409]}, mt), |
| | | | | [500001210] = sm({vi[22],500001210,'101_150',j[995],j[2],d[409]}, mt), |
| | | | | [500001211] = sm({vi[22],500001211,'151_200',j[996],j[2],d[409]}, mt), |
| | | | | [500001212] = sm({vi[22],500001212,'201_300',j[997],j[2],d[409]}, mt), |
| | | | | [500001213] = sm({vi[22],500001213,'301_500',j[998],j[2],d[409]}, mt), |
| | | | | [500001214] = sm({vi[22],500001214,'501_700',j[999],j[2],d[409]}, mt), |

其他














缓存策略:

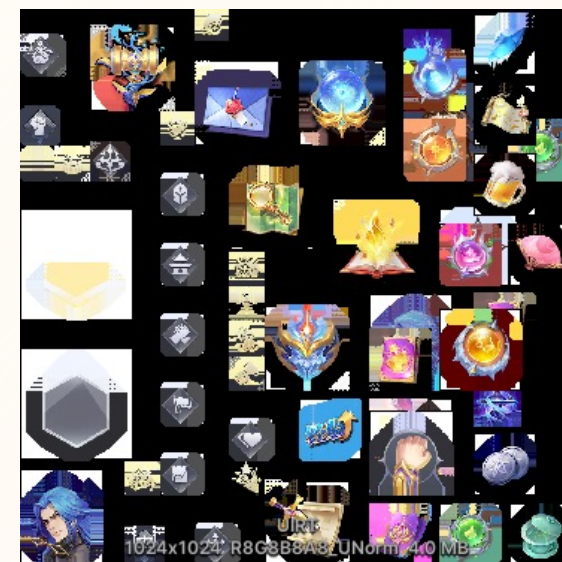


finalblit:



动态图集

| | | | |
|---|-----------------|--------|----------|
|  bag12.png | 2023/8/28 17:22 | PNG 文件 | 410 KB |
|  bag11.png | 2023/8/28 17:22 | PNG 文件 | 6,798 KB |
|  bag10.png | 2023/7/24 17:08 | PNG 文件 | 6,166 KB |
|  bag9.png | 2023/5/29 0:49 | PNG 文件 | 6,327 KB |
|  bag8.png | 2023/5/12 15:59 | PNG 文件 | 5,698 KB |
|  bag7.png | 2023/1/18 11:48 | PNG 文件 | 5,218 KB |
|  bag6.png | 2023/8/18 14:16 | PNG 文件 | 6,080 KB |
|  bag5.png | 2023/7/11 10:33 | PNG 文件 | 5,917 KB |
|  bag4.png | 2023/1/4 15:08 | PNG 文件 | 6,216 KB |
|  bag3.png | 2023/5/4 15:36 | PNG 文件 | 5,902 KB |
|  bag2.png | 2023/1/4 15:08 | PNG 文件 | 4,708 KB |
|  bag1.png | 2023/5/4 15:36 | PNG 文件 | 4,568 KB |
|  bag0.png | 2023/1/4 15:08 | PNG 文件 | 5,306 KB |



运行时-现状

```
self
M.Update,Core/Battle/Entity/View/Npc/NpcView&line:157
]:_M.Inst_get,GameSystem/UI/SpringActivity/Manager/SpringActivityMgr&line:17
lua]:class_type.new,class&line:43
[lua]:_M._init_,GameSystem/UI/SpringActivity/Manager/SpringActivityMgr&line:26
▼ [lua]:_M.SpringActivityMgr,GameSystem/UI/SpringActivity/Manager/SpringActivityMgr&line:34
  ▼ [lua]:require GameSystem/UI/SpringActivity/NetLogic/SpringActivityNetLogic,GameSystem/UI/SpringActivity/NetLogic/SpringActivityNetLogic&line:1
    ▶ [lua]:require GameSystem/Game/Message/spring2023festival/ResChooseBlessSuccess,GameSystem/Game/Message/spring2023festival/ResCho
    ▶ [lua]:require GameSystem/Game/Message/seriestrial/ResSpringMainActivityPanel,GameSystem/Game/Message/seriestrial/ResSpringMainActivityP
    ▶ [lua]:require GameSystem/Game/Message/spring2023festival/ResBlessDanMu,GameSystem/Game/Message/spring2023festival/ResBlessDanMu&
    ▶ [lua]:require GameSystem/Game/Message/newyear/springfestival/ResFixSetMonsterAttribute,GameSystem/Game/Message/newyear/springfestiva
    ▶ [lua]:require GameSystem/Game/Message/spring2023festival/ResBlessFireworkPanel,GameSystem/Game/Message/spring2023festival/ResBlessF
    ▶ [lua]:require GameSystem/Game/Message/newyear/springfestival/ResAscendCloudBattleFormationUpdate,GameSystem/Game/Message/newyear
    ▶ [lua]:require GameSystem/Game/Message/seriestrial/ResSwordGodPanel,GameSystem/Game/Message/seriestrial/ResSwordGodPanel&line:1
    ▶ [lua]:require GameSystem/Game/Message/seriestrial/ResSwordGodRankQuery,GameSystem/Game/Message/seriestrial/ResSwordGodRankQuery&
  [lua]:_M._init_,Core/Battle/Entity/StateMachine/State/StateDead&line:81
  ▶ [lua]:_M.__newindex,Dictionary&line:237
  ▶ [lua]:_M._init_,Core/Battle/Entity/StateMachine/State/StateAttack&line:81
  [lua]:_M.new,Dictionary&line:60
▼ [lua]:_M._init_,Core/Battle/Entity/StateMachine/StateMachine&line:48
  ▼ [lua]:_M.StateMachine,Core/Battle/Entity/StateMachine/StateMachine&line:54
    ▶ [lua]:_M.SetModel,Core/Battle/Entity/StateMachine/StateMachine&line:148
    ▼ [lua]:_M.F_InitViewInfo,Core/Battle/Entity/View/EntityView&line:218
      ▼ [lua]:_M.InitMapEntityView,Core/Battle/Entity/View/EntityView&line:239
        ▼ [lua]:_M.GetEntityAssetToParent,Core/Battle/Entity/EntityBridge/EntityAssetMgrBridge&line:14
          [lua]:_M.ToCsLong,Core/Engine/CommonSystem/Proxy/LusuoLong&line:216
          ▼ [lua]:_M.GetAinControllerResPath,Core/Battle/Entity/Model/User/User&line:609
            [lua]:CList.Reycle,CList&line:56
            ▶ [lua]:_M.Split,Core/Engine/CommonSystem/Proxy/StringProxy&line:334
            [lua]:_M.Replace,Core/Engine/CommonSystem/Proxy/StringProxy&line:252
            [lua]:_M.GetResPath,GameSystem/Common/Path/PathHelper&line:297
```

运行时性能



交互层:

```
private static BetterList<int> intBuffer0 = new BetterList<int>();
private static BetterList<int> intBuffer1 = new BetterList<int>();
private static BetterList<int> intBuffer2 = new BetterList<int>();
private static BetterList<uint> uintBuffer0 = new BetterList<uint>();
private static BetterList<uint> uintBuffer1 = new BetterList<uint>();
private BetterList<string> stringBuffer0 = new BetterList<string>();
private static BetterList<VoidDelegateVo> _voidDelegateDic = new BetterList<VoidDelegateVo>();
private static BetterList<UIntDelegateVo> _uintDelegateDic = new BetterList<UIntDelegateVo>();
private static BetterList<BoolDelegateVo> _boolDelegateDic = new BetterList<BoolDelegateVo>();
private static BetterList<FloatDelegateVo> _floatDelegateDic = new BetterList<FloatDelegateVo>();
private static BetterList<Float2DelegateVo> _float2DelegateDic = new BetterList<Float2DelegateVo>();
private static BetterList<ObjectDelegateVo> _objectDelegateDic = new BetterList<ObjectDelegateVo>();
private static BetterList<KeyCodeDelegateVo> _keyCodeDelegateDic = new BetterList<KeyCodeDelegateVo>();
```

网络层:

```
/// <summary>
/// C#收到Socket协议, 传给Lua端
/// </summary>
2 references
public static void ReceiveSocketMessage(List<int> intList, List<byte[]> strList, List<float> floatList, int intListLength,
    int stringListLength, int floatListLength, List<int> poolTypeDataLength, List<uint> uintList, int uintListLength)...
```

指针输送

```
8 references
public override int GetInt(int index)
{
    if (LuaArrAccessAPI.CanUseQuick)
    {
        if (TableRawPtr != null && index > 0 && index <= TableRawPtr->sizearray)
        {
            index -= index - 1;
            LuaTValue32* tv = (LuaTValue32*)(TableRawPtr->array) + index;
            if (tv->tt_ == LuaEnvValues.LUA_TNUMINT)
            {
                return (int)tv->i;
            }
            else
            {
                return (int)tv->n;
            }
        }
        else
        {
            LuaAdapterException.ThrowIfNeeded(TableRawPtr == null, index, GetArrayCapacity());
            return 0;
        }
    }
    else
    {
        return trueLuaTable.RawGet<int, int>(index);
    }
}

6 references
public override void SetInt(int index, int Value)
{
    if (LuaArrAccessAPI.CanUseQuick)
    {
        if (TableRawPtr != null && index > 0 && index <= TableRawPtr->sizearray)
        {
            index -= index - 1;
            LuaTValue32* v = ((LuaTValue32*)(TableRawPtr->array)) + index;
            v->i = Value;
            v->tt_ = LuaEnvValues.LUA_TNUMINT;
        }
        else
        {
            LuaAdapterException.ThrowIfNeeded(TableRawPtr == null, index, GetArrayCapacity());
        }
    }
    else
    {
        CsCallLuaMgr.SetListTableByIndex(trueLuaTable, Value, index);
    }
}
```



开启Unsafe

Zero ObjectTranslator

Static Binding Engine

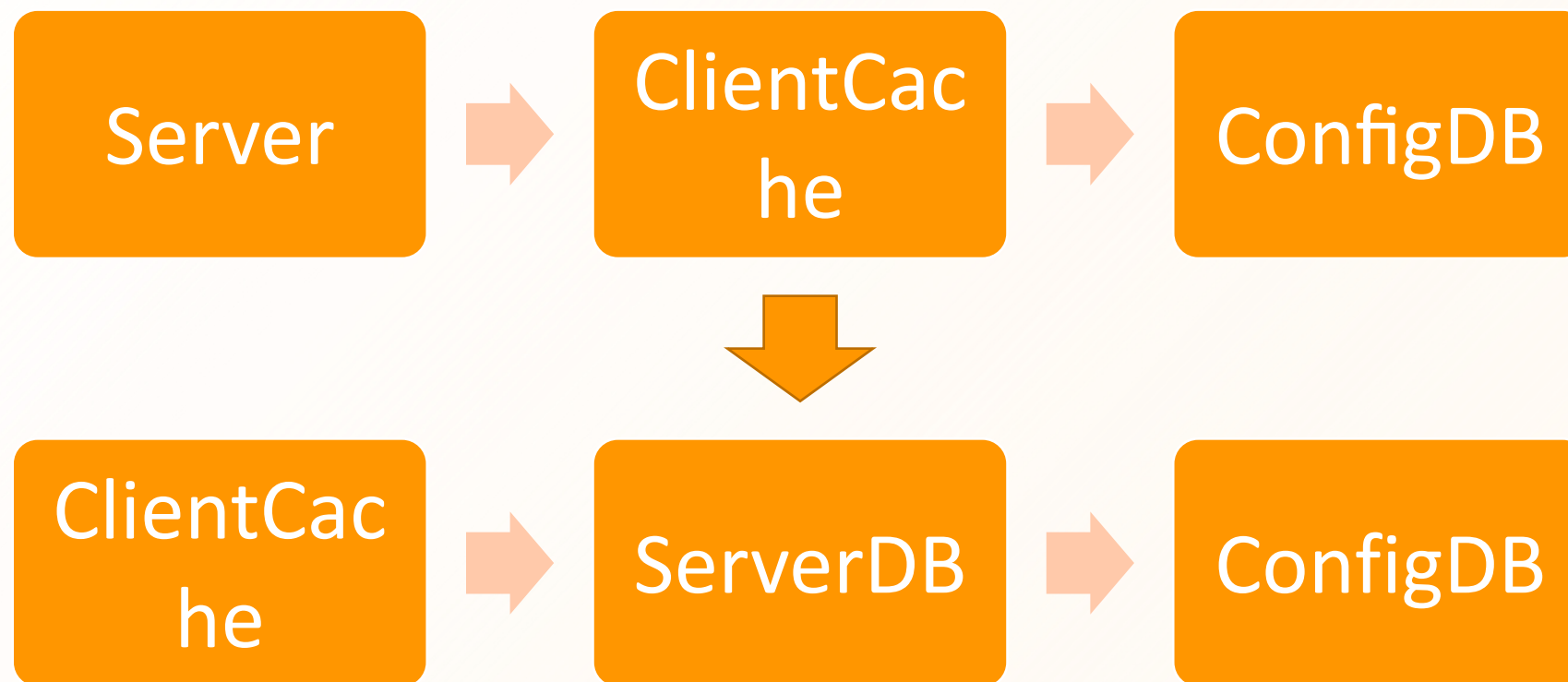
Jank: 107->64

脚本加载

| | A | B | C | D | E | F |
|----|--|--------|---|---|---|---|
| 1 | CConfig/db/q_soul_bone | 306063 | | | | |
| 2 | CConfig/db/q_soul_bone_year | 149036 | | | | |
| 3 | CConfig/db/q_soul_bone_2 | 146342 | | | | |
| 4 | CConfig/db/q_task | 132742 | | | | |
| 5 | CConfig/db/q_soul_bone_4 | 116873 | | | | |
| 6 | GameSystem/Game/Battle/Model/BattleMod | 98683 | | | | |
| 7 | CConfig/db/q_soul_ring | 95260 | | | | |
| 8 | CConfig/db/q_displayconfig | 87883 | | | | |
| 9 | CConfig/db/q_soul_bone_1 | 77484 | | | | |
| 10 | CConfig/db/q_soulroad_section | 67702 | | | | |
| 11 | CConfig/db/q_map | 66214 | | | | |
| 12 | CConfig/db/q_soul_bone_5 | 62564 | | | | |
| 13 | GameSystem/UI/CardBag/Model/CardBagMod | 61029 | | | | |
| 14 | GameSystem/UI/SoulRivalry/Model/SoulRi | 60355 | | | | |
| 15 | Core/Engine/CommonSystem/Proxy/GF | 57772 | | | | |
| 16 | CConfig/db/q_soul_bone_3 | 51526 | | | | |
| 17 | Core/Dungeon/Model/NewDungeonProgressP | 48145 | | | | |
| 18 | CConfig/db/q_soul_bone_22 | 47708 | | | | |
| 19 | CConfig/db/q_activity | 47445 | | | | |
| 20 | CConfig/db/q_soul_bone_0 | 47423 | | | | |
| 21 | GameSystem/UI/SoulRing/Model/SoulRingM | 46530 | | | | |

```
Core/Engine/Net/Sockets/SocketManager:185: in function 'Update'
Core/Engine/LuaEngineBridge:37: in function <Core/Engine/LuaEngineBridge:33>
...
+config/db/q_senior awake activity.lua
+config/db/q_soul_bone.lua
  sourcelua/gamesystem/game/luacfg/manager/dbmgr.lua:stack traceback:
  tolua.lua:60: in function 'require'
  GameSystem/Game/LuaConfig/Manager/DBMgr:150: in function 'GetConfigTable'
  GameSystem/Game/LuaConfig/ConfigDB/SoulBoneConfig:46: in function 'GetAllSoulBoneInfo'
  GameSystem/UI/SoulBone/Model/SoulBoneModel:487: in function 'InitAppendSoulBoneCfg'
  GameSystem/UI/SoulBone/Model/SoulBoneModel:137: in function 'SoulBoneModel'
  GameSystem/UI/SoulBone/Model/SoulBoneModel:30: in function '_init_'
  class:48: in function 'new'
  GameSystem/UI/SoulBone/Manager/SoulBoneMgr:24: in function 'SoulBoneMgr'
  GameSystem/UI/SoulBone/Manager/SoulBoneMgr:11: in function '_init_'
  class:48: in function 'new'
  GameSystem/UI/SoulBone/Manager/SoulBoneMgr:38: in function 'Inst_get'
  GameSystem/UI/CardBag/Model/CardInfo:976: in function 'UpdateSoulBoneInfo'
  GameSystem/UI/CardBag/Model/CardInfo:379: in function 'InitData'
  GameSystem/UI/CardBag/Model/CardBagModel:644: in function 'AddCard'
  GameSystem/UI/CardBag/Model/CardBagModel:492: in function 'ResCardBagMsg'
  GameSystem/UI/CardBag/NetLogic/CardBagNetLogic:61: in function 'handlerClass'
  Core/Engine/Net/Sockets/MessagePool:110: in function 'F_SendHandler'
  Core/Engine/Net/Sockets/SocketManager:410: in function 'SendMsgHandle'
  Core/Engine/Net/Sockets/SocketManager:384: in function 'BroadcastServerMsg'
  Core/Engine/Net/Sockets/SocketManager:185: in function 'Update'
  Core/Engine/LuaEngineBridge:37: in function <Core/Engine/LuaEngineBridge:33>
...
config/db/q_soul_bone_0.lua:stack traceback:
tolua.lua:60: in function 'require'
CConfig/db/q_soul_bone_0:94: in main chunk
[C]: in function 'require'
GameSystem/Game/LuaConfig/Manager/DBMgr:150: in function 'GetConfigTable'
GameSystem/Game/LuaConfig/ConfigDB/SoulBoneConfig:17: in function 'GetSoulBoneInfo'
GameSystem/UI/SoulBone/Model/SoulBoneModel:495: in function 'InitAppendSoulBoneCfg'
GameSystem/UI/SoulBone/Model/SoulBoneModel:137: in function 'SoulBoneModel'
GameSystem/UI/SoulBone/Model/SoulBoneModel:30: in function '_init_'
class:48: in function 'new'
GameSystem/UI/SoulBone/Manager/SoulBoneMgr:24: in function 'SoulBoneMgr'
GameSystem/UI/SoulBone/Manager/SoulBoneMgr:11: in function '_init_'
...
GameSystem/UI/CardBag/Model/CardInfo:976: in function 'UpdateSoulBoneInfo'
```

访问框架



结构与插件

Json:

LitJson: 全解析

FastJson: 单字段

数据结构:

非值需求Dictionary改Hashtable

引擎与插件:

管线 (buildin/srp)

assetbundle (LZMA/LZ4)

寻路

物理

timeline

视频

预设拆分

合作

| | | | |
|----------------------|-----------------|----------|----------|
| q_soul_bone.bytes | 2023/8/28 21:16 | BYTES 文件 | 1,713 KB |
| q_soul_bone_0.bytes | 2023/8/28 17:49 | BYTES 文件 | 37 KB |
| q_soul_bone_1.bytes | 2023/8/28 17:49 | BYTES 文件 | 37 KB |
| q_soul_bone_2.bytes | 2023/8/28 17:49 | BYTES 文件 | 38 KB |
| q_soul_bone_3.bytes | 2023/8/28 17:49 | BYTES 文件 | 38 KB |
| q_soul_bone_4.bytes | 2023/8/28 17:49 | BYTES 文件 | 40 KB |
| q_soul_bone_5.bytes | 2023/8/28 17:49 | BYTES 文件 | 37 KB |
| q_soul_bone_6.bytes | 2023/8/28 17:49 | BYTES 文件 | 38 KB |
| q_soul_bone_7.bytes | 2023/8/28 17:49 | BYTES 文件 | 46 KB |
| q_soul_bone_8.bytes | 2023/8/28 17:49 | BYTES 文件 | 38 KB |
| q_soul_bone_9.bytes | 2023/8/28 17:49 | BYTES 文件 | 41 KB |
| q_soul_bone_10.bytes | 2023/8/28 17:49 | BYTES 文件 | 57 KB |
| q_soul_bone_11.bytes | 2023/8/28 17:49 | BYTES 文件 | 52 KB |
| q_soul_bone_12.bytes | 2023/8/28 17:49 | BYTES 文件 | 56 KB |
| q_soul_bone_13.bytes | 2023/8/28 17:49 | BYTES 文件 | 51 KB |
| q_soul_bone_14.bytes | 2023/8/28 17:49 | BYTES 文件 | 56 KB |
| q_soul_bone_15.bytes | 2023/8/28 17:49 | BYTES 文件 | 48 KB |

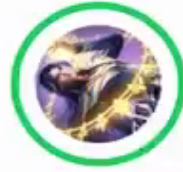


| | | | |
|------------------------------------|----------------|-----------------|-------|
| q_soul_bone.lua | 2023/8/1 11:12 | Lua Script File | 15 KB |
| q_soul_bone_0.lua | 2023/8/1 11:12 | Lua Script File | 43 KB |
| q_soul_bone_adhesion_refine.lua | 2023/8/1 11:12 | Lua Script File | 2 KB |
| q_soul_bone_adhesion_refine_0.lua | 2023/8/1 11:12 | Lua Script File | 3 KB |
| q_soul_bone_adhesion_refine_1.lua | 2023/8/1 11:12 | Lua Script File | 4 KB |
| q_soul_bone_adhesion_refine_2.lua | 2023/8/1 11:12 | Lua Script File | 5 KB |
| q_soul_bone_adhesion_refine_3.lua | 2023/8/1 11:12 | Lua Script File | 5 KB |
| q_soul_bone_adhesion_refine_4.lua | 2023/8/1 11:12 | Lua Script File | 5 KB |
| q_soul_bone_adhesion_refine_5.lua | 2023/8/1 11:12 | Lua Script File | 6 KB |
| q_soul_bone_adhesion_refine_6.lua | 2023/8/1 11:12 | Lua Script File | 6 KB |
| q_soul_bone_adhesion_refine_7.lua | 2023/8/1 11:12 | Lua Script File | 6 KB |
| q_soul_bone_adhesion_refine_8.lua | 2023/8/1 11:12 | Lua Script File | 2 KB |
| q_soul_bone_adhesion_refine_9.lua | 2023/8/1 11:12 | Lua Script File | 4 KB |
| q_soul_bone_adhesion_refine_10.lua | 2023/8/1 11:12 | Lua Script File | 4 KB |



| | | | |
|------------------|-----------------|----------|----------|
| q_item.bytes | 2023/8/28 17:49 | BYTES 文件 | 3,418 KB |
| q_item1.bytes | 2023/8/28 17:49 | BYTES 文件 | 3,418 KB |
| q_item1_0.bytes | 2023/8/28 17:49 | BYTES 文件 | 69 KB |
| q_item1_1.bytes | 2023/8/28 17:49 | BYTES 文件 | 46 KB |
| q_item1_2.bytes | 2023/8/28 17:49 | BYTES 文件 | 66 KB |
| q_item1_3.bytes | 2023/8/28 17:49 | BYTES 文件 | 44 KB |
| q_item1_4.bytes | 2023/8/28 17:49 | BYTES 文件 | 46 KB |
| q_item1_5.bytes | 2023/8/28 17:49 | BYTES 文件 | 58 KB |
| q_item1_6.bytes | 2023/8/28 17:49 | BYTES 文件 | 44 KB |
| q_item1_7.bytes | 2023/8/28 17:49 | BYTES 文件 | 58 KB |
| q_item1_8.bytes | 2023/8/28 17:49 | BYTES 文件 | 43 KB |
| q_item1_9.bytes | 2023/8/28 17:49 | BYTES 文件 | 42 KB |
| q_item1_10.bytes | 2023/8/28 17:49 | BYTES 文件 | 42 KB |
| q_item1_11.bytes | 2023/8/28 17:49 | BYTES 文件 | 42 KB |
| q_item1_12.bytes | 2023/8/28 17:49 | BYTES 文件 | 44 KB |
| q_item1_13.bytes | 2023/8/28 17:49 | BYTES 文件 | 67 KB |
| q_item1_14.bytes | 2023/8/28 17:49 | BYTES 文件 | 62 KB |
| q_item1_15.bytes | 2023/8/28 17:49 | BYTES 文件 | 51 KB |

| | | | |
|---------------|-----------------|-----------------|-------|
| q_item_0.lua | 2023/8/1 11:12 | Lua Script File | 4 KB |
| q_item_1.lua | 2023/8/1 11:12 | Lua Script File | 4 KB |
| q_item_2.lua | 2023/8/1 11:12 | Lua Script File | 51 KB |
| q_item_3.lua | 2023/8/1 11:12 | Lua Script File | 4 KB |
| q_item_4.lua | 2023/8/1 11:12 | Lua Script File | 6 KB |
| q_item_5.lua | 2023/8/1 11:12 | Lua Script File | 77 KB |
| q_item_6.lua | 2023/8/1 11:12 | Lua Script File | 5 KB |
| q_item_7.lua | 2023/8/1 11:12 | Lua Script File | 5 KB |
| q_item_8.lua | 2023/8/1 11:12 | Lua Script File | 2 KB |
| q_item_9.lua | 2023/8/3 14:53 | Lua Script File | 91 KB |
| q_item_10.lua | 2023/8/3 14:53 | Lua Script File | 72 KB |
| q_item_11.lua | 2023/8/25 20:49 | Lua Script File | 51 KB |
| q_item_12.lua | 2023/8/3 14:53 | Lua Script File | 56 KB |



斗罗大陆之魂师对决

小游戏

该小游戏已接入健康系统，家长可通过成长守护功能进行监督，抵制不良游戏，拒绝盗版游戏。注意自我保护，谨防受骗上当，适度游戏益脑，沉迷游戏伤身。合理安排时间，享受健康生活。
开发团队承诺积极履行《网络游戏防沉迷自律公约》

感谢观看

