



携程技术沙龙

Electron在携程的实践

潘斐斐
Flora Pan

潘斐斐



- Node.js基础设施建设
- 参与编写《携程架构实践》

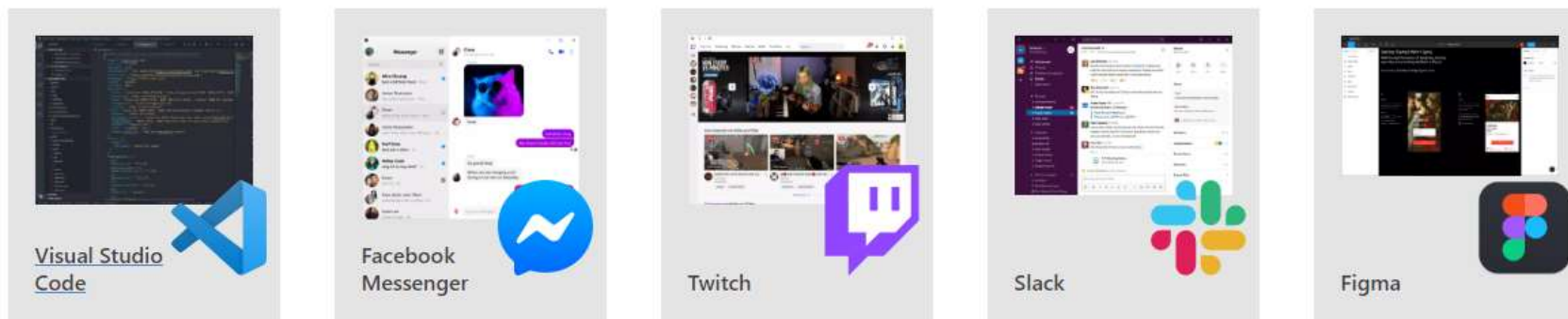


目录

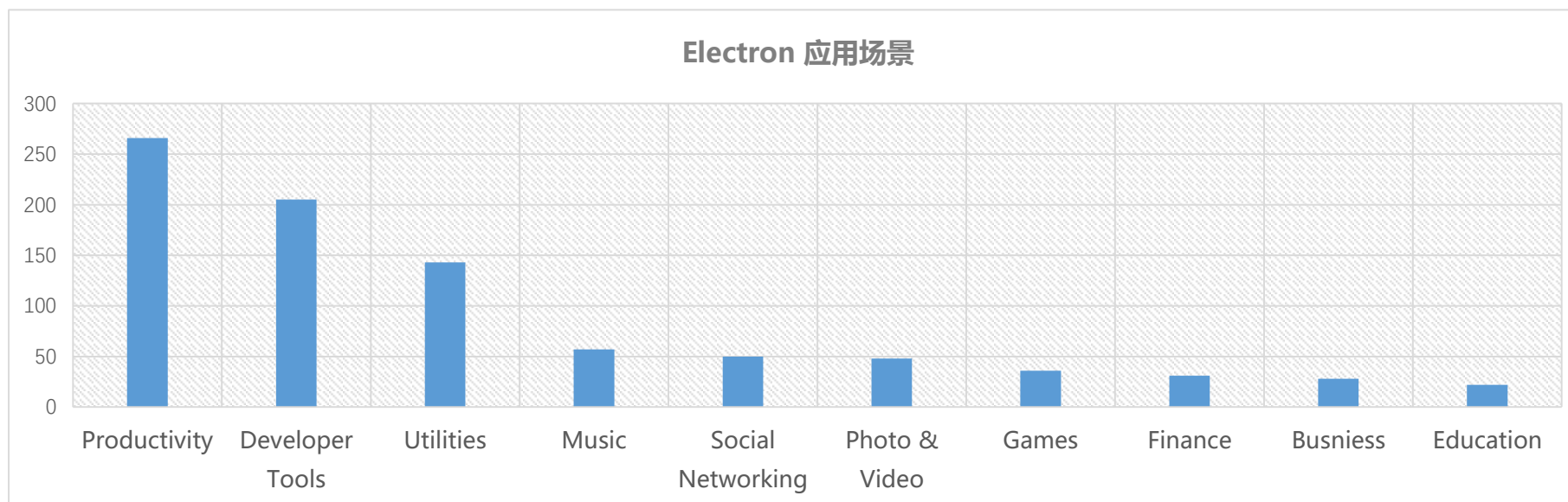
CONTENTS

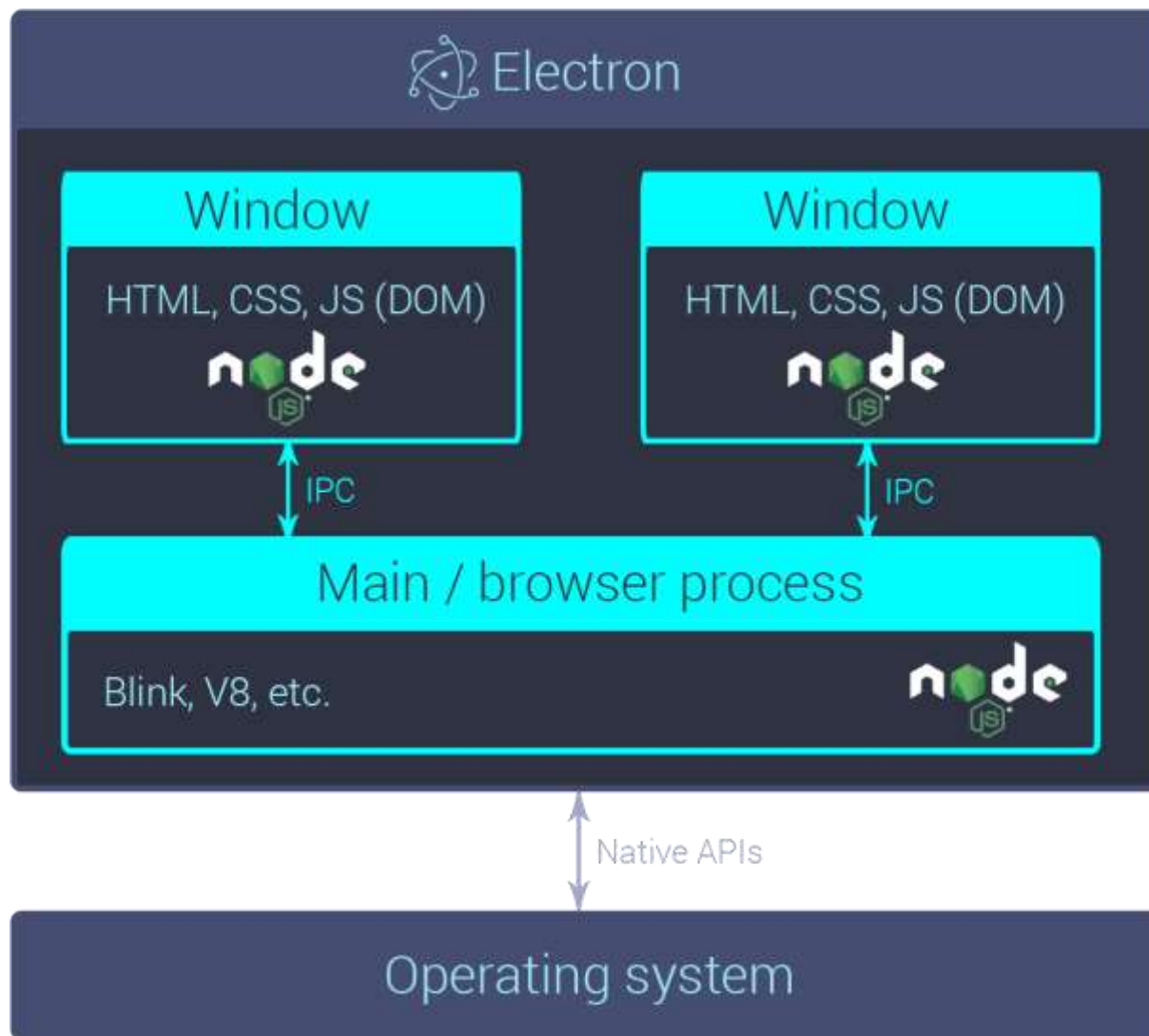
- 1 背景介绍
- 2 Electron核心中间件
- 3 Electron MiniApp
- 4 Electron 性能优化实践
- 5 总结与展望

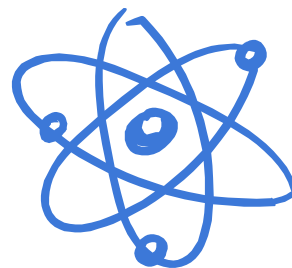
Apps users love, built with Electron



Thousands of organizations spanning all industries use Electron to build cross-platform software.







产品

GUI桌面应用

跨平台(Windows/Mac/Linux)

功能快速迭代更新

技术

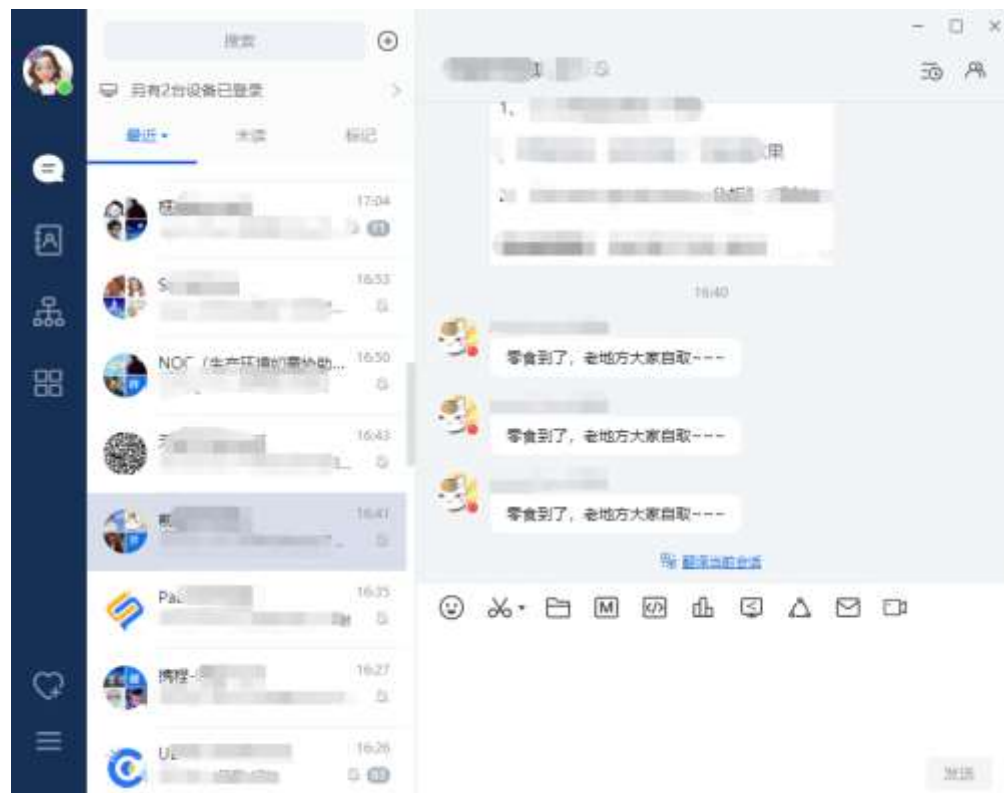
WEB技术(HTML/CSS/JS/Node.js)

成熟的技术框架

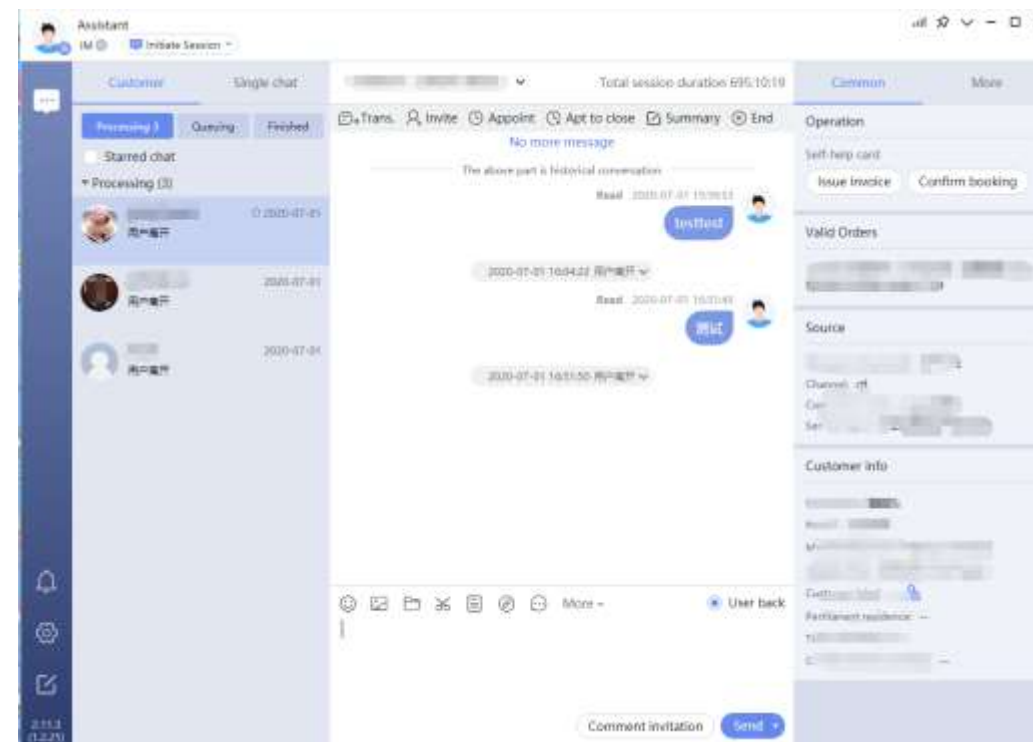
活跃社区群

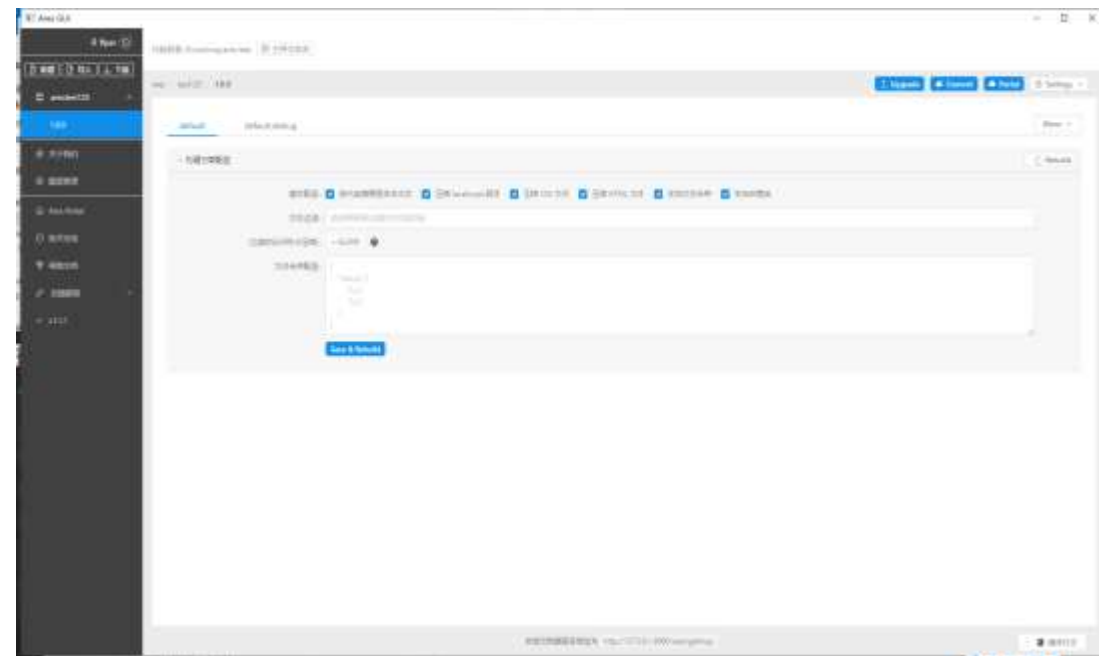


集团内部员工IM工具



IM+ - 集团客服IM工具





核心中间件

UI组件
基础组件
桌面端小程序框架

持续集成平台

在线构建
更新机制
灰度下发

监控系统

桌面端监控平台
用户排障
预警

核心中间件

UI中间件

图片浏览器

文件预览器

表情包

系统通知

...

基础中间件

数据共享

进程锁机制

热更新

自动更新

性能数据采集

崩溃采集

调试工作台

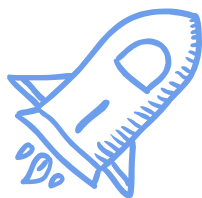
桌面小程序框架

小程序框架

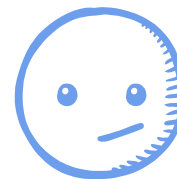
持续集成平台



监控系统



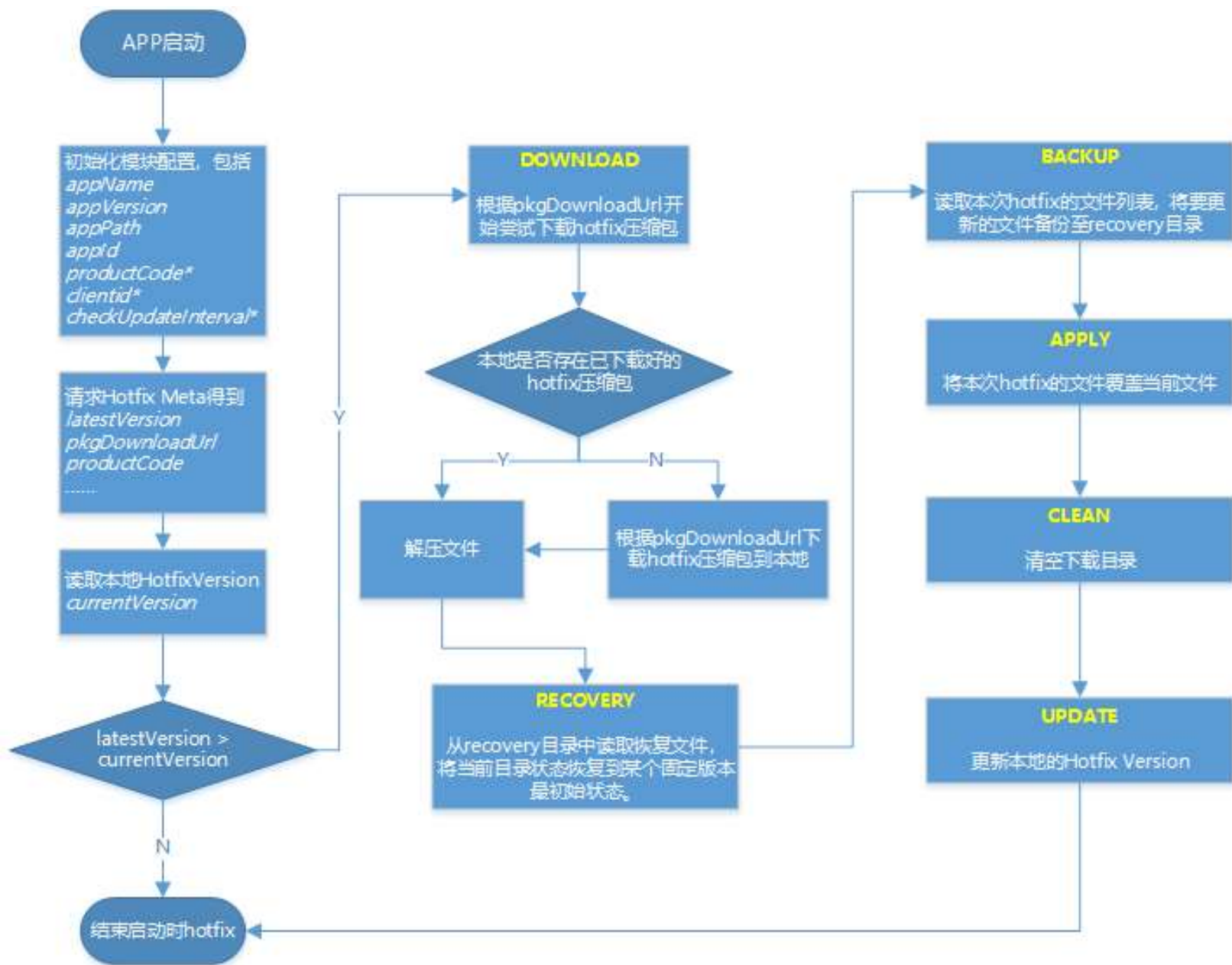
用户**性能**监控平台

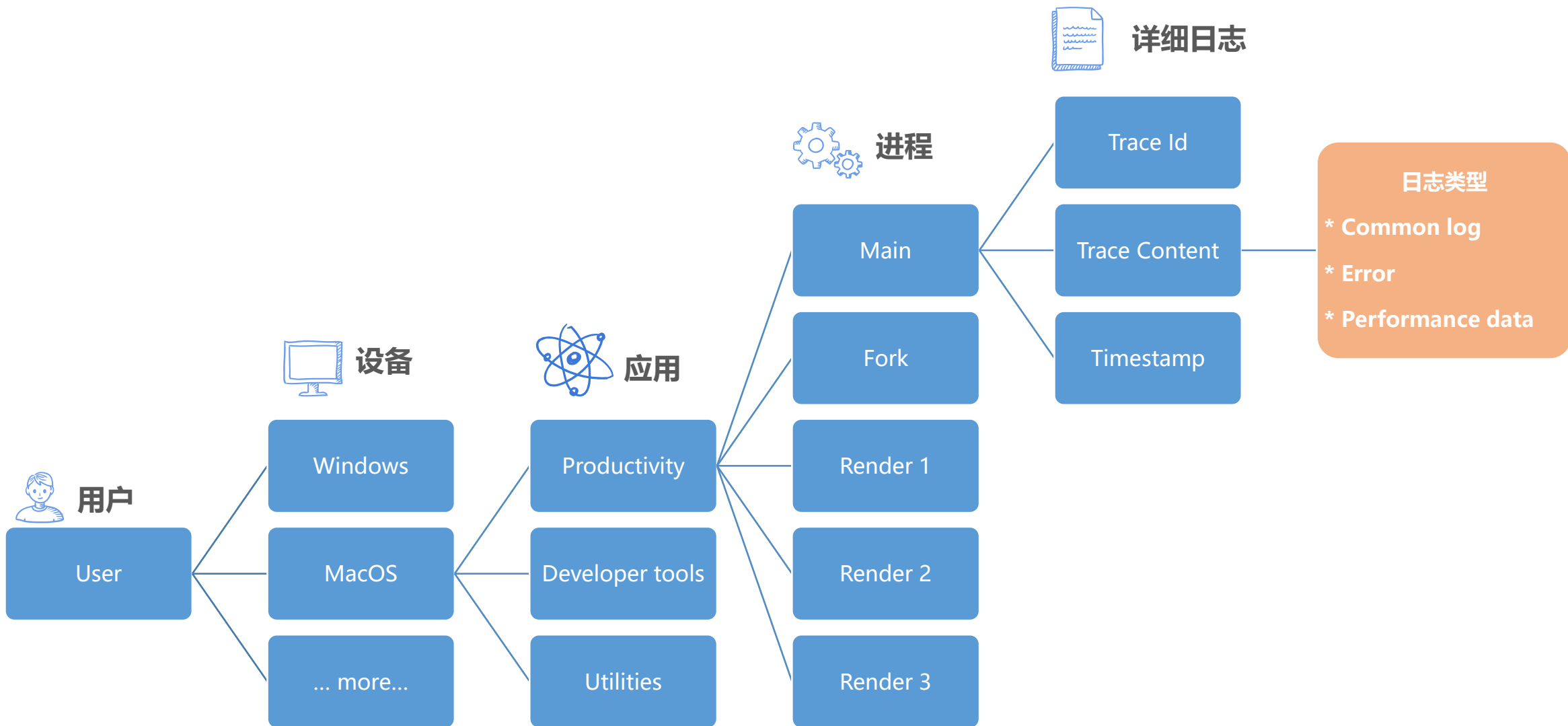


系统**崩溃**日志监控平台

热更新流程设计









TripPal Tracking

* Uid:

* StartTime ~ StopTime:

2020-08-16 00:00 → 2020-08-18 00:00

Search

Clear

Search History
uid
uid
uid:
uid:

Vid	LaunchId	ProcessId	ProcessType	AppId	AppName	StartTime
[win32] 6250e12e97	57	12260			MiniAppInTrippal	2020-08-17 09:06:57
		12300			TripPal	2020-08-17 09:06:47
		7820	browser		TripPal	2020-08-17 09:06:46
[win32] 925126269ba4c687	85	13344	browser		MiniAppInTrippal	2020-08-17 09:04:30
		4148			MiniAppInTrippal	2020-08-16 00:06:40
	86	1228			TripPal	2020-08-17 15:43:45
		1232			MiniAppInTrippal	2020-08-17 15:43:59



Log4Desktop展示

	Time	Trace	Content
+	2020-08-17 09:06:57.306	124222	["openim",lastmessageTime=1567500000000,appData={re
+	2020-08-17 09:06:57.392	124225	Action=sdk_connect&Params={}&SDKType=-2.2.2&SocketUrl=
+	2020-08-17 09:06:57.404	IMSDK从DB查消息 耗时 (130857)	Action=db_query_conversation
+	2020-08-17 09:06:57.446	124226	Action=set_network
+	2020-08-17 09:06:57.471	trippal pc problem trace (131464)	<div><div>{</div><div> "action": "onReceiveConversationListener"</div><div> "newLastMsgId": { ... }</div><div>}</div></div>
+	2020-08-17 09:06:57.476	124238	partnerId: 107127401925 e.g. k Type": "groupchat", "name": "Hic Type": "g S.T 5122 0", "C DAL&D SDKType=WEBSOCKET-5077-2.3.0_1.5.1&URL=INODE&SDKVersion=2.2
+	2020-08-17 09:06:57.620	IMSDK从DB查消息 耗时 (130857)	Action=db_query_conversation&totalTime=53&SDKType=WEBSOCKET-5077-2.3.0_1.5.1&URL=INODE&SDKVersion=2.2

Sentry

electron::ElectronBindings::Crash

Fatal Error: EXCEPTION_ACCESS_VIOLATION_WRITE

Resolve

Ignore

Share

Open in Discover

ISSUE #

IMPLUS - 6

EVENTS

2

USERS

0

ASSIGNEE

Details

Comments

User Feedback

Attachments

Tags

Events

Merged

Similar Issues

Event c0620bda4d7049f98e5419dcee495d04

Aug 13, 2020 10:20:00 AM UTC

JSON (217.6 KB)

Unknown User

Windows

Version: 10.0.17763

Unknown Device

Arch: x86_64

TAGS

handled

no

level

fatal

mechanism

minidump

os

Windows 10.0.17763

os.name

Windows

Thread #15052: electron::ElectronBindings::Crash

(most recent call first)

Full

Raw

id

15052

name

n/a

was active

no

errored

yes

EXCEPTION_ACCESS_VIOLATION_WRITE

Fatal Error: EXCEPTION_ACCESS_VIOLATION_WRITE

mechanism

minidump

handled

no

electron

+0x0105550

electron::ElectronBindings::Crash (electron_bindings.cc:151)

registers

r14

0x00000000303f6d80

r15

0x0000000000000000

r12

0x00001d6f854253c1

r13

0x00007ff68b987660

r10

0x000013c50a0d57

r11

0x0000000000000000

r16

0x0000000000000000

Show More

electron

+0x001776f

base::RepeatingCallback<T>::Run (callback.h:132)

electron

+0x001776f

mate::internal::Invoker<T>::DispatchToCallback (function_template.h:212)

electron

+0x1ca81f1

gin::Converter<T>::FromV8 (converter.cc:242)

electron

+0x2ba3700

v8::base::anonymous namespace::QPCValueToTimeDelta (time.cc:630)

Ownership Rules

Create Ownership Rule

All Environments

LAST 24 HOURS

LAST 30 DAYS

FIRST SEEN

When: 21 minutes ago

Aug 13, 2020 10:19:55 AM UTC

Release: not configured

LAST SEEN

When: 21 minutes ago

Aug 13, 2020 10:20:00 AM UTC

Release: not configured

Linked Issues

Set up Issue Tracking

Tags

handled

no 100%

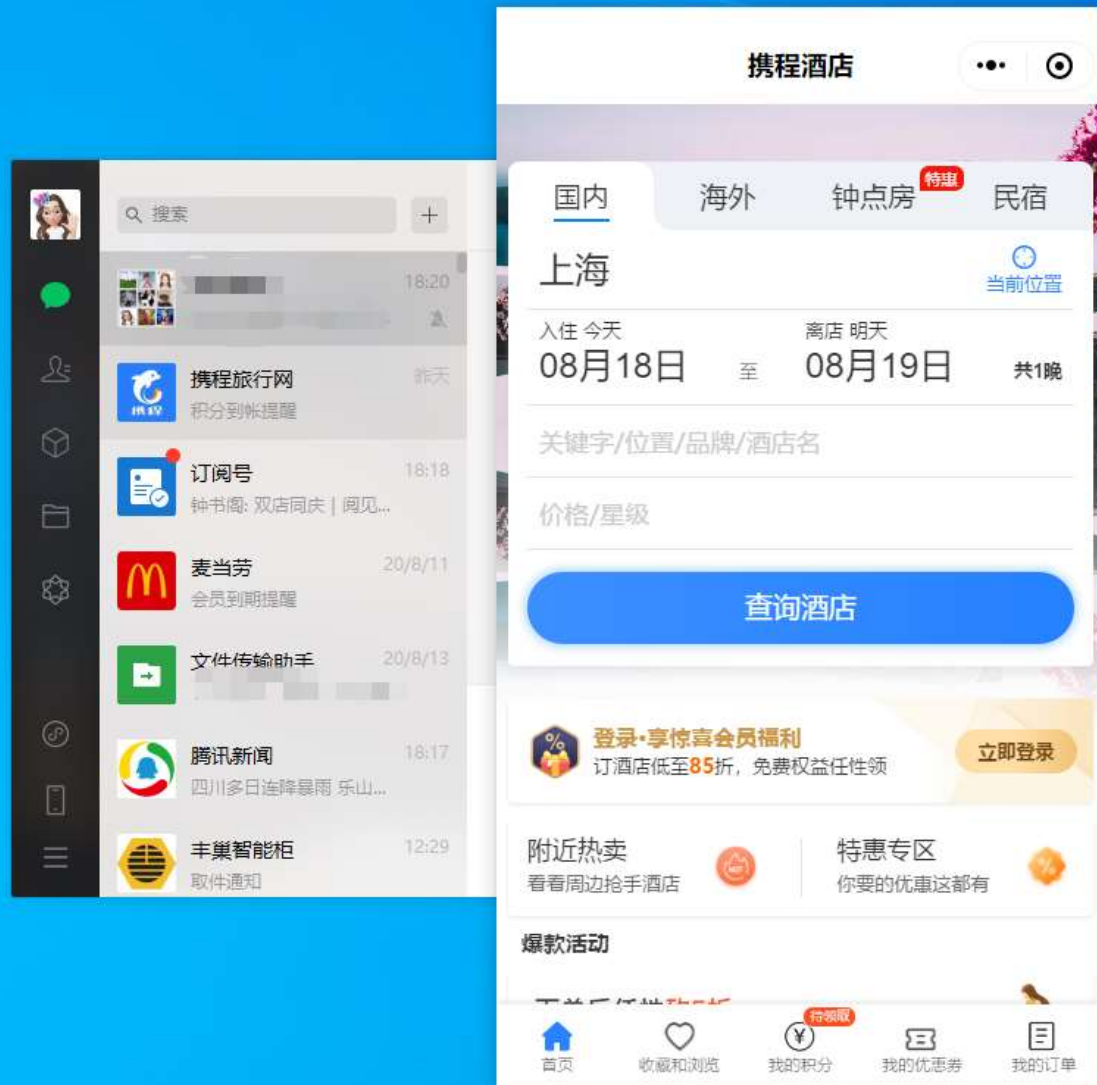
level

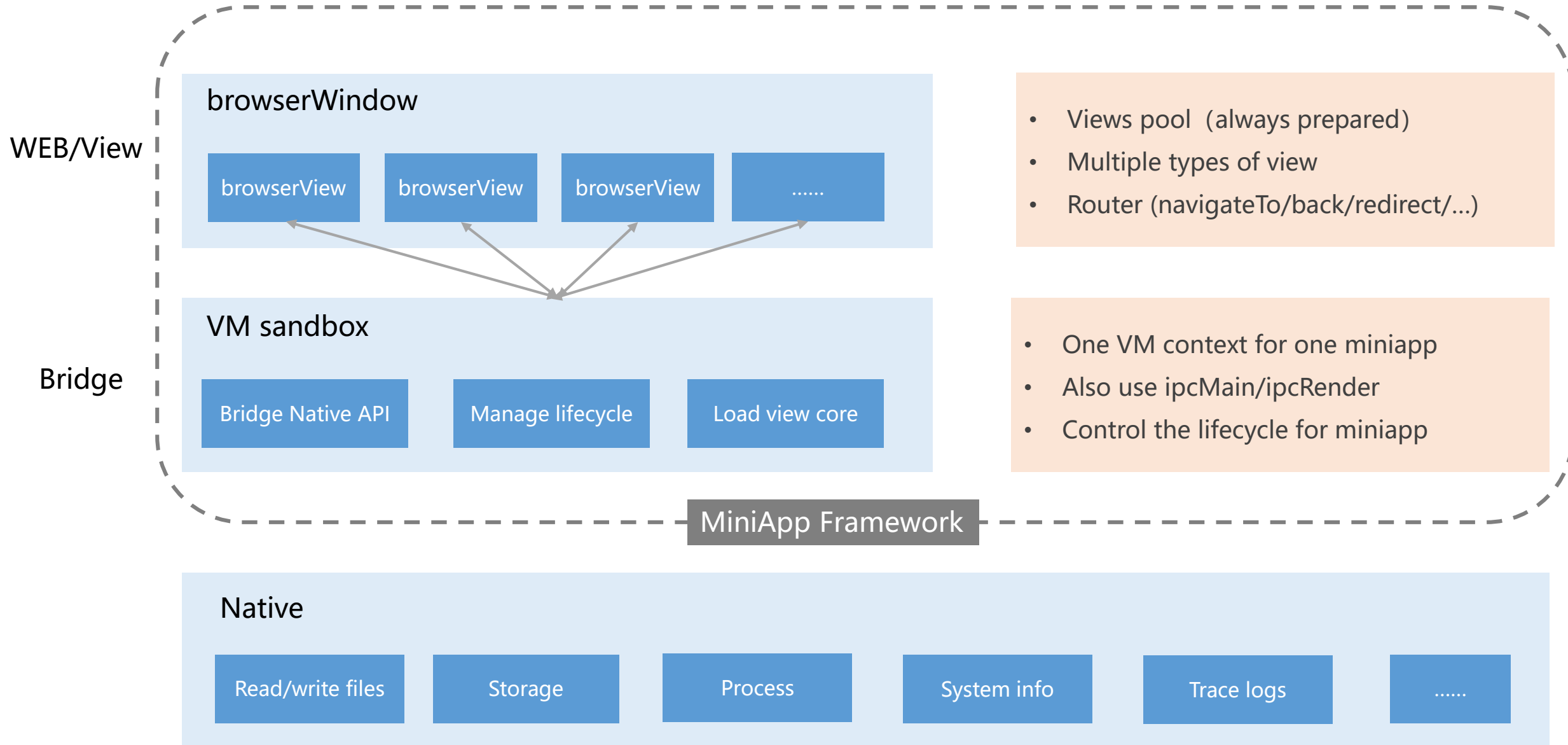
fatal 100%

mechanism

minidump 100%

支持主进程、渲染进程、fork进程





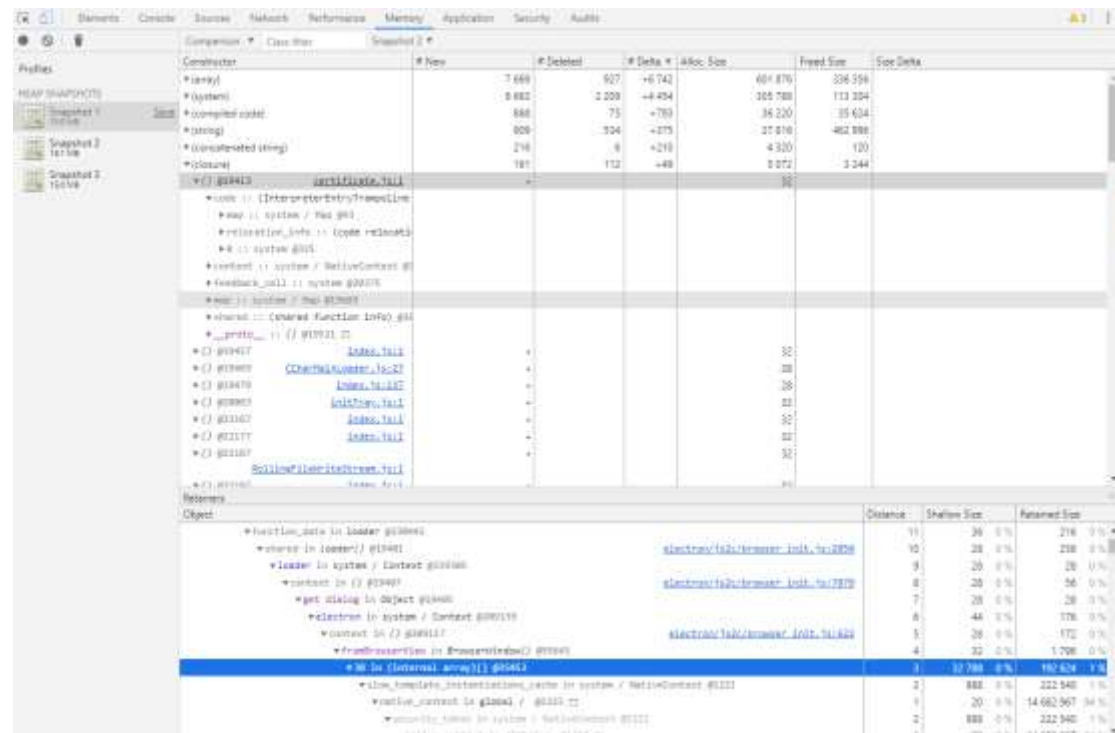
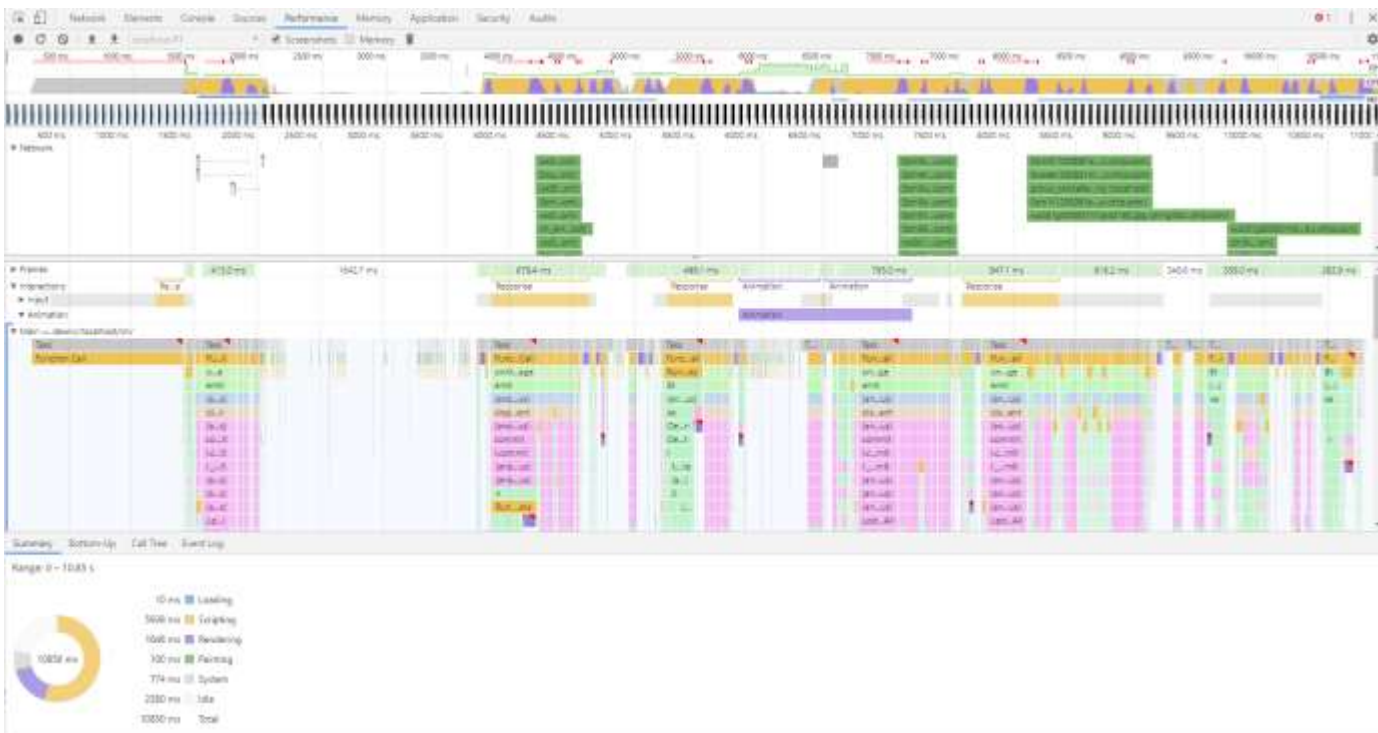
Measure

React

Repeat

Chrome Tracing Tool

<https://developers.google.com/web/tools/chrome-devtools/evaluate-performance>



- 尽量减少网络请求

- 利用资源请求拦截registerSchemesAsPrivileged

1.

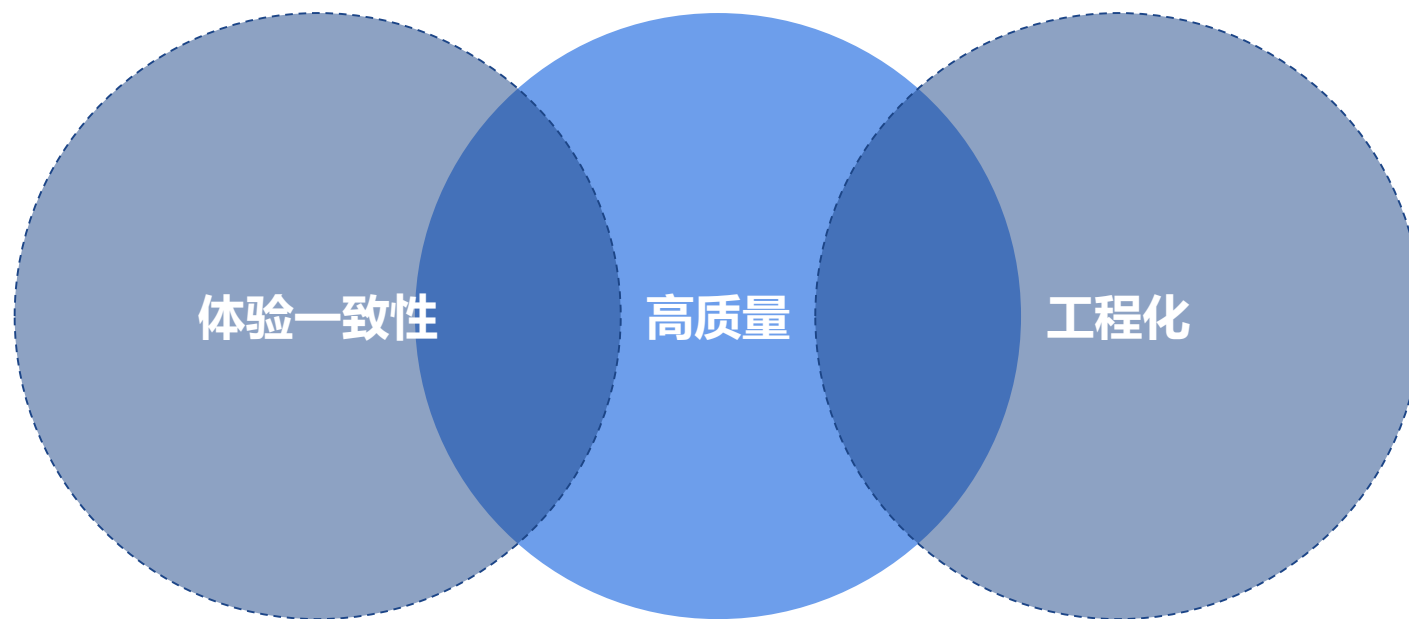
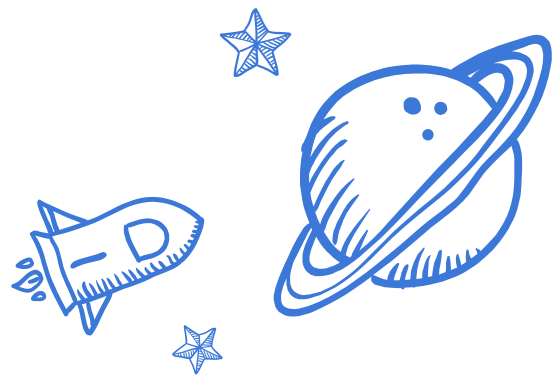
- 避免高并发的网络请求

代码演示

Name	Status	Type	Initiator	Size	Time	V
<input type="checkbox"/> bf.gif?ac=a&d=ultbMSwibWF0cmI4IIOsWzEwNjU...	200	gif	bfa.min.js?v=201910_1:7	390 B	14 ms	
<input type="checkbox"/> bf.gif?ac=tl&pi=10650028639&key=o_im_online...	200	gif	bfa.min.js?v=201910_1:7	390 B	16 ms	
<input type="checkbox"/> GetMamConversationMessages.json?_=1572590...	200	fetch	ajaxExtend.js:246	5.4 KB	28 ms	
<input type="checkbox"/> itapp01_im_cc_webphone_extensionCheck	200	xhr	0.a510c24...js:7	661 B	216 ms	
<input type="checkbox"/> GetConversationUnreadInfo.json?_=1572590530...	200	fetch	ajaxExtend.js:246	1.1 KB	17 ms	
<input type="checkbox"/> bf.gif?ac=tl&pi=10650028639&key=o_im_online...	200	gif	bfa.min.js?v=201910_1:7	390 B	11 ms	
<input type="checkbox"/> bf.gif?ac=a&d=ultbMSwibWF0cmI4IIOsWzEwNjU...	200	gif	bfa.min.js?v=201910_1:7	390 B	11 ms	
<input type="checkbox"/> GetConversation.json?_=1572590530263	200	fetch	ajaxExtend.js:246	1.2 KB	163 ms	
<input type="checkbox"/> bf.gif?ac=tl&pi=10650028639&key=o_im_online...	200	gif	bfa.min.js?v=201910_1:7	390 B	161 ms	
<input type="checkbox"/> bf.gif?ac=a&d=ultbMSwibWF0cmI4IIOsWzEwNjU...	200	gif	bfa.min.js?v=201910_1:7	390 B	162 ms	
<input type="checkbox"/> bf.gif?ac=tl&pi=10650028639&key=103563&val...	200	gif	bfa.min.js?v=201910_1:7	390 B	40 ms	
<input checked="" type="checkbox"/> data:image/png;base...	200	png	0.a510c24...js:7	(from memo...	0 ms	
<input checked="" type="checkbox"/> data:image/png;base...	200	png	0.a510c24...js:7	(from memo...	0 ms	
<input type="checkbox"/> zm0m190000018avq129ED.png	200	png	0.a510c24...js:7	(from disk ca...	36 ms	
<input type="checkbox"/> zm03190000018381h3ABB.png	200	png	0.a510c24...js:7	(from disk ca...	36 ms	
<input checked="" type="checkbox"/> data:image/png;base...	200	png	0.a510c24...js:7	(from memo...	0 ms	
<input type="checkbox"/> zm0i1900000180bd418F6.png	200	png	0.a510c24...js:7	(from disk ca...	37 ms	
<input type="checkbox"/> zm0j1a00000187stp1258.png	200	png	0.a510c24...js:7	(from disk ca...	37 ms	
<input type="checkbox"/> zm0k1a0000018chhmFD0CD.png	200	png	0.a510c24...js:7	(from disk ca...	37 ms	
<input type="checkbox"/> bf.gif?ac=tl&pi=10650028639&key=o_im_online...	200	gif	C:\Program Files\CChat\...	390 B	23 ms	
<input type="checkbox"/> bf.gif?ac=a&d=ultbMSwibWF0cmI4IIOsWzEwNjU...	200	gif	C:\Program Files\CChat\...	390 B	24 ms	
<input type="checkbox"/> itapp01_im_user_getProfile	200	xhr	0.a510c24...js:7	832 B	37 ms	
<input type="checkbox"/> bf.gif?ac=a&d=ultbMSwibWF0cmI4IIOsWzEwNjU...	200	gif	bfa.min.js?v=201910_1:7	390 B	36 ms	

- 保证快速响应
 - CPU密集型操作使用Worker Threads或者fork一个额外进程处理
 - 能异步的尽量都异步 (ipcMain.invoke / fs.readFile / ...)
 - 在需要时再require模块，不要在一开始全部加载进来

代码演示





“携程技术” 微信公众号
分享，交流，成长



《携程架构实践》

Thanks
Q&A