

# 前端内存泄漏监控预研 (智慧昌南 web-1571 事故分析)

2021/7/7

## 前端内存泄漏监控预研 (智慧昌南 web-1571 事故分析)

问题发现 (智慧昌南)

问题关键代码

502 Bad Gateway 错误

前端内存泄漏监控工具

Chrome Performance

easy monitor3

FunDebug

预研结论

## 问题发现 (智慧昌南)

智慧昌南大屏: <https://superchangnan.anxinyun.cn/>

- SVN: <http://10.8.30.22/FS-SmartChangnan/branches/superScreen/web>
  - Revision: 1571
  - Message: (\*) modify 公测热点加载
- 内存溢出原因: 前端瞬发了 78 次接口请求 (<https://superchangnan.anxinyun.cn/api/>)。

## 问题关键代码

内存溢出关键代码如下:

- GET <https://superchangnan.anxinyun.cn/api/gis/toilet> (返回值属性 `rs1t` 数组 length = 78)
- GET <https://superchangnan.anxinyun.cn/api/gis/toilet/detail>

```
/// client/src/sections/default/containers/bigScreen.js

// bug
getToiletLists = () => {
  const _this = this;
  _this.props.dispatch(getToiletList(0)).then((res) => {
    if (res.payload.data) {
      let structIds = res.payload.data.map(s => s.id)
      _this.props.dispatch(getToiletCostMonthData(structIds.toString()))
      // _this.getToiletComment(structIds.toString())

      let data = [];
      res.payload.data.map(s => {
        // memory leak (前端瞬发了 78 次接口请求导致内存溢出)
        _this.props.dispatch(getToiletDetail(s.id)).then(x => {
          _this.toiletDetails[s.id] = x.payload.data[s.id];
        });
      });
    }
  });
}
```

```

        _this.setState({ toiletDetails: _this.toiletDetails })
    })

    data.push({ "key": s.id, "name": s.name })
  })
  _this.props.dispatch(getToiletFlowrate(data));
}
})
}

// fixed
getToiletLists = () => {
  const _this = this;
  _this.props.dispatch(getToiletList(0)).then((res) => {
    if (res.payload.data) {
      let structIds = res.payload.data.map(s => s.id)
      _this.props.dispatch(getToiletCostMonthData(structIds.toString()))
      _this.getToiletComment(structIds.toString())
      let data = [];
      res.payload.data.map(s => {
        data.push({ "key": s.id, "name": s.name })
      })
      _this.props.dispatch(getToiletFlowrate(data));
    }
  })
  this.props.dispatch(getToiletDetail()).then(x => {
    _this.setState({ toiletDetails: x.type ==
    'REQUEST_TOILET_DETAIL_SUCCESS' ? x.payload.data : {} })
  })
}
}

```

## 502 Bad Gateway 错误

```

<-- GET /_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-
4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c
--> GET /_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-
4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c 502 88ms 150b

```

### Firefox 控制台:

```

> GET http://localhost:19800/_api/toilet/month/money?structIds=158,159,154,155,1311,935,3531,1551,1530,1527,1546,1534,222,1314,1499,1315,1521,1554,1553,105,176,192,1555,106,1522,1544,1559,1472,1582,1587,1303,114,1568,1492,1556,1557,1307,1526,112,1523,109,1389,1498,227,... [HTTP/1.1 502 Bad Gateway 5665ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5640ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5639ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5639ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5638ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5644ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5659ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5659ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5658ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5676ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5666ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5638ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5712ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5706ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5704ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5703ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5736ms]
> GET http://localhost:19800/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475bf73c9&token=7fb99a61-6faa-45dc-a61a-2bdccf37bc0c [HTTP/1.1 502 Bad Gateway 5736ms]

```

## 前端内存泄漏监控工具

# Chrome Performance

昌南大屏 Chrome 访问异常。

## easy monitor3

localhost:12333/overview?processName=myEasyMonitor&serverName=FSZJ-PENGLING&pid=24488&opt=own&tag=process.vue&pidList=24488

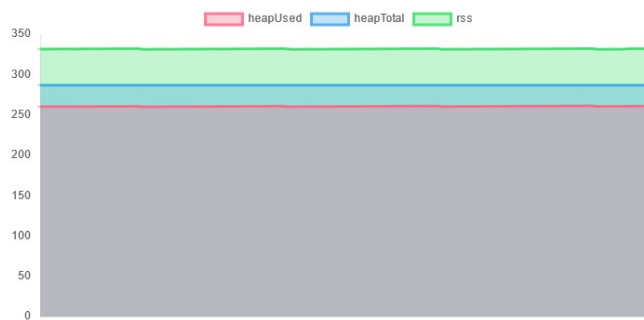
# myEasyMonitor

PID-24488

当前 CPU 使用率



当前 Memory 占用



## FunDebug

官网: <https://www.fundebug.com/>

The screenshot displays the FunDebug dashboard for a React-APP-Demo. It shows a 502 GET error from localhost:15000. The error details include the request URL, headers, and a 502 status response. The interface also shows a list of events and a performance section with a '事件中止' (Event Stopped) indicator.

```
502 GET http://localhost:15000/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475b73c98&token=7f699a61-6faa-45dc-a61a-2bdccf37bc0c
Bad Gateway 6070.00ms
2021-07-09 16:43 - 2021-07-09 16:43
```

```
HTTP请求错误
method: GET
url: http://localhost:15000/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475b73c98&token=7f699a61-6faa-45dc-a61a-2bdccf37bc0c
params: token = 7f699a61-6faa-45dc-a61a-2bdccf37bc0c
toiletToken = 666d23b7-f6c4-4550-bccc-98e475b73c98
structId = {structId}
status: 502
statusText: Bad Gateway
response: <html> <head><title>502 Bad Gateway</title></head> <body> <center><h1>502 Bad Gateway</h1></center> <hr><center>nginx</center> </body> </html>
elapsedTime: 6070ms
```

```
HTTP请求
method: GET
url: http://localhost:15000/_api/gis/toilet/detail?structId={structId}&toiletToken=666d23b7-f6c4-4550-bccc-98e475b73c98&token=7f699a61-6faa-45dc-a61a-2bdccf37bc0c
params: structId = {structId}
toiletToken = 666d23b7-f6c4-4550-bccc-98e475b73c98
token = 7f699a61-6faa-45dc-a61a-2bdccf37bc0c
status: 502
```

## 预研结论

---

1. 针对昌南大屏 web-1571 版本中 循环遍历 REST API 请求 的异常，通过浏览器控制台即可发现问题，且这类问题属于请求池被耗尽问题，并非内存泄漏问题。
2. 内存泄漏通常浏览器会提供分析功能（如 Chrome 的 Performance 功能），可以先从浏览器入手，再尝试其他第三方工具。