

Flash Media Server Loading Simulator 工作原理

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什么是Loading Simulator

- 目前处于Prerelease状态
- 针对Flash Media Server
- 独立工具
- 测试FMS性能
- 将支持GUI和command-line
- 通过XML Playlist加载播放列表
- 支持FLV,F4V/MP4,MP3
- 支持RTMP协议



谁可能需要Loading Simulator

- 流媒体网站管理员
- Flash流媒体应用开发人员
- Flash Media Server运营工程师
- Flash流媒体应用测试人员

Loading Simulator目前不能支持

- 动态媒体 Dynamic streaming（多比特率流媒体）
- 服务器端验证
- DVR Streaming
- Shared objects
- RTMPE,RTMPS,RTMPT和RTMPTE

Loading Simulator工作界面

The screenshot displays the Loading Simulator application window. At the top, there is a menu bar with 'File', 'Actions', and 'Help'. Below the menu bar is a toolbar containing icons for file operations and buttons for 'Start Test', 'Stop', and 'Properties'. The main area is divided into two panes. The left pane, titled 'Profile', shows a tree view under 'continuousplay' with several test scenarios: 'Continuous (50)', 'Seek (0)', 'OpenClose (10)', 'PlayPause (0)', and 'Random (0)'. The right pane is a table with columns 'ID', 'Bytes Received', and 'Error Count', containing seven rows of data.

ID	Bytes Received	Error Count
1	18535039	0
2	18535039	0
3	18535039	0
4	18535039	0
5	18535039	0
6	18535039	0
7	18535039	0

Below the panes, there are two tabs: 'Test Overview' and 'Load Simulation Log'. The 'Load Simulation Log' tab is active and contains the following text:

To make changes to this test's configuration or view all the details, click Properties in the tool bar.

Test stats

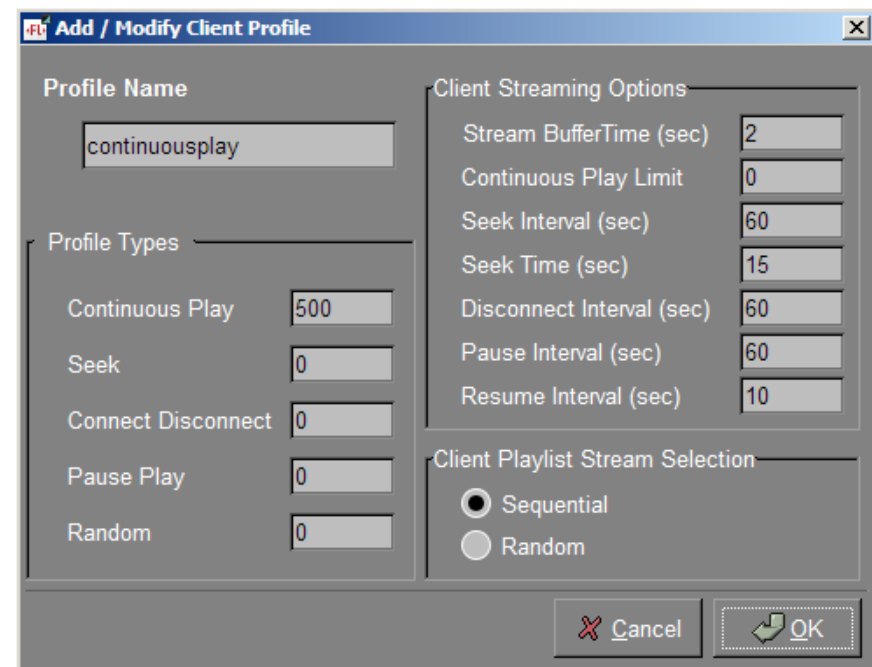
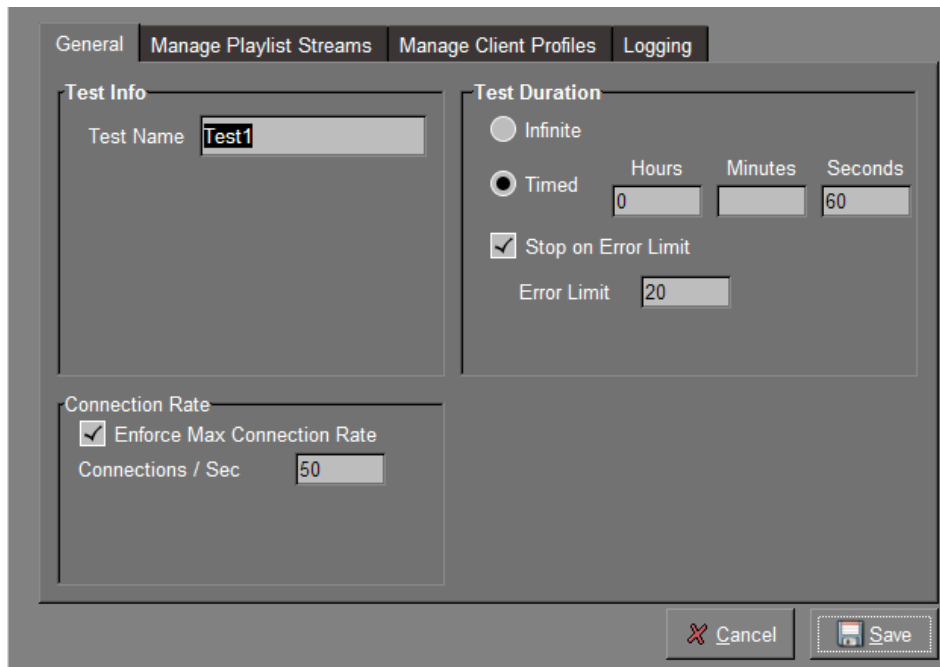
Total Clients:	60	Start Time:	Tue Sep 01 10:27:53 2009
Connected:	60	Elapsed Time:	207.003000021
Playing:	60	Total Errors:	0
		Connection Rate:	10 per/sec

Logging

Load Simulator log: client.log

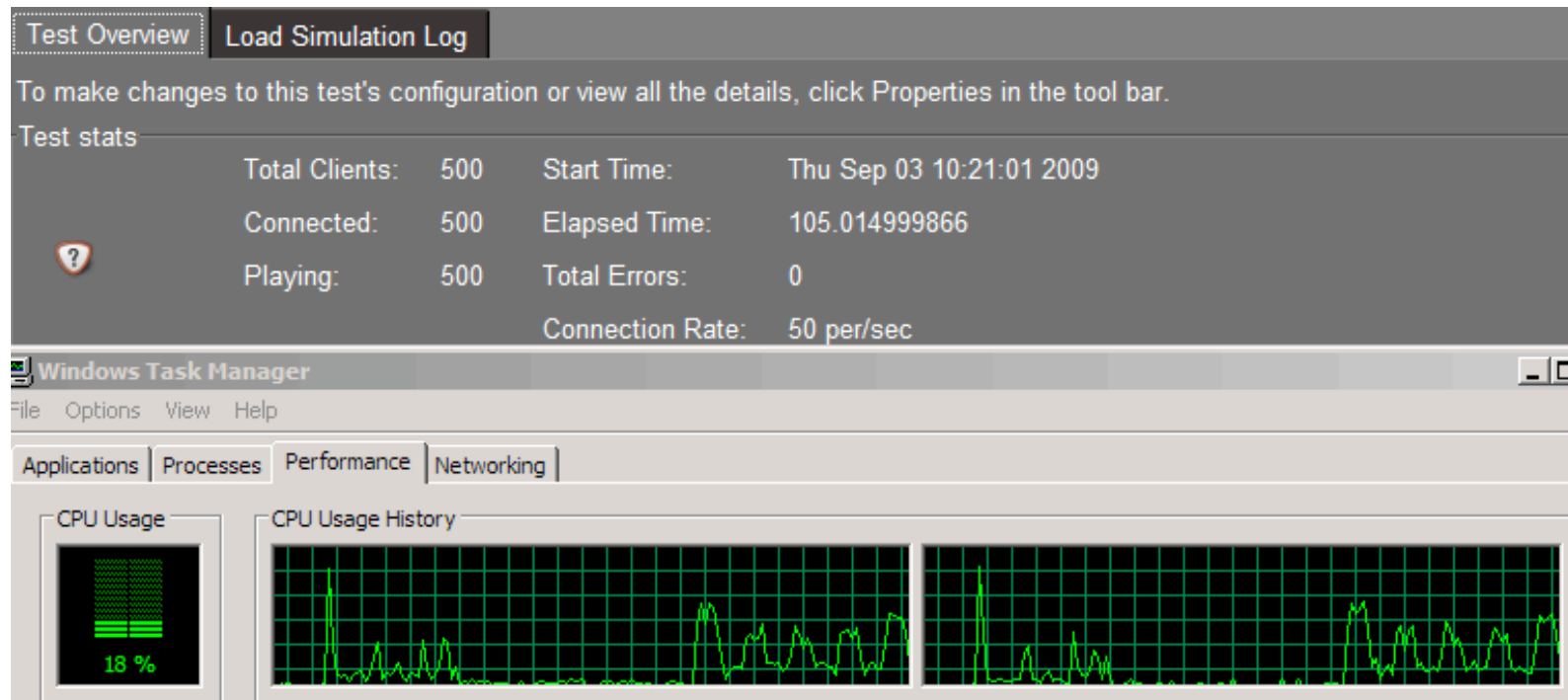
Loading Simulator XML配置

- GUI调整测试时间和并发连接以及NetStream数量



实时监控 (Win)

- 通过Windows Task Manager



Load Simulator 结果分析

access.xx.log

```
#Version: 1.0
#Start-Date: 2009-09-01 09:16:10
#Software: Adobe Flash Media Server 3.5.1 r516
#Date: 2009-09-01
#Fields: x-category      x-event date      time      x-pid      c-ip      cs-bytes      sc-bytes      x-sname sc-stre
#Date: 2009-09-01
#Fields: x-category      x-event date      time      x-pid      c-ip      cs-bytes      sc-bytes      x-sname sc-stre
session connect 2009-09-01      09:16:13      12440      127.0.0.1      3073      3073      -      -      -
session connect 2009-09-01      09:16:13      12440      127.0.0.1      3073      3073      -      -      -
stream play     2009-09-01      09:16:13      12440      127.0.0.1      3160      3451      sample2_1000kbps.f4v
stream stop     2009-09-01      09:16:13      12440      127.0.0.1      3222      449185      sample2_1000kbps.f4v
stream play     2009-09-01      09:16:13      12440      127.0.0.1      3222      449185      sample2_1000kbps.f4v
stream stop     2009-09-01      09:16:13      12440      127.0.0.1      3222      451278      sample2_1000kbps.f4v
stream play     2009-09-01      09:16:13      12440      127.0.0.1      3284      451494      sample2_1000kbps.f4v
stream stop     2009-09-01      09:16:57      12440      127.0.0.1      3284      6154599      sample2_1000kbps.f4v
stream play     2009-09-01      09:17:00      12440      127.0.0.1      3395      6154852      sample2_1000kbps.f4v
stream stop     2009-09-01      09:17:01      12440      127.0.0.1      3457      6511527      sample2_1000kbps.f4v
stream play     2009-09-01      09:17:01      12440      127.0.0.1      3457      6511527      sample2_1000kbps.f4v
session disconnect 2009-09-01      09:17:30      12440      127.0.0.1      3073      3410      -      -
stream stop     2009-09-01      09:17:31      12440      127.0.0.1      3483      11241663      sample2_1000kby
session disconnect 2009-09-01      09:17:31      12440      127.0.0.1      3483      11241663      -
session connect 2009-09-01      09:17:31      12440      127.0.0.1      3073      3073      -      -
stream play     2009-09-01      09:17:31      12440      127.0.0.1      3236      10981      sample1_150kbps.f4v
stream stop     2009-09-01      09:17:32      12440      127.0.0.1      3619      520247      sample1_150kbps.f4v
stream play     2009-09-01      09:17:32      12440      127.0.0.1      3619      520247      sample1_1500kbps.f4v
stream stop     2009-09-01      09:17:32      12440      127.0.0.1      3619      520247      sample1_1500kbps.f4v
stream play     2009-09-01      09:17:32      12440      127.0.0.1      3619      520247      sample1_1500kbps.f4v
stream stop     2009-09-01      09:17:32      12440      127.0.0.1      3619      547043      sample1_1500kbps.f4v
stream play     2009-09-01      09:17:32      12440      127.0.0.1      3729      547259      sample1_1500kbps.f4v
stream stop     2009-09-01      09:17:34      12440      127.0.0.1      4031      1832706      sample1_1500kbps.f4v
```

Load Simulator的最强搭档

```
<Events>stop</Events>
```

```
<Fields>x-event;x-category;date;time;x-cpu-load;x-app;x-appinst;x-duration;x-status;c-ip;s-uri;c-referrer;c-user-agent;cs-bytes;sc-bytes;x-sname;x-file-size;x-file-length;x-spos;sc-stream-bytes;x-sc-qos-bytes</Fields>
```

```
<MaxSize>10240</MaxSize>
```



Overview
▶ Date and time
▶ Visitor demographics
Events
Categories
Cpu loads
Applications
Appinsts
Play durations
Status
Organizations
Domains
ISPs
Cache URLs
Referrers
User agents
Stream names
File sizes
File lengths
Stream positions
Server-to-client stream by
Server QOS bytes
Comments
▶ Sessions

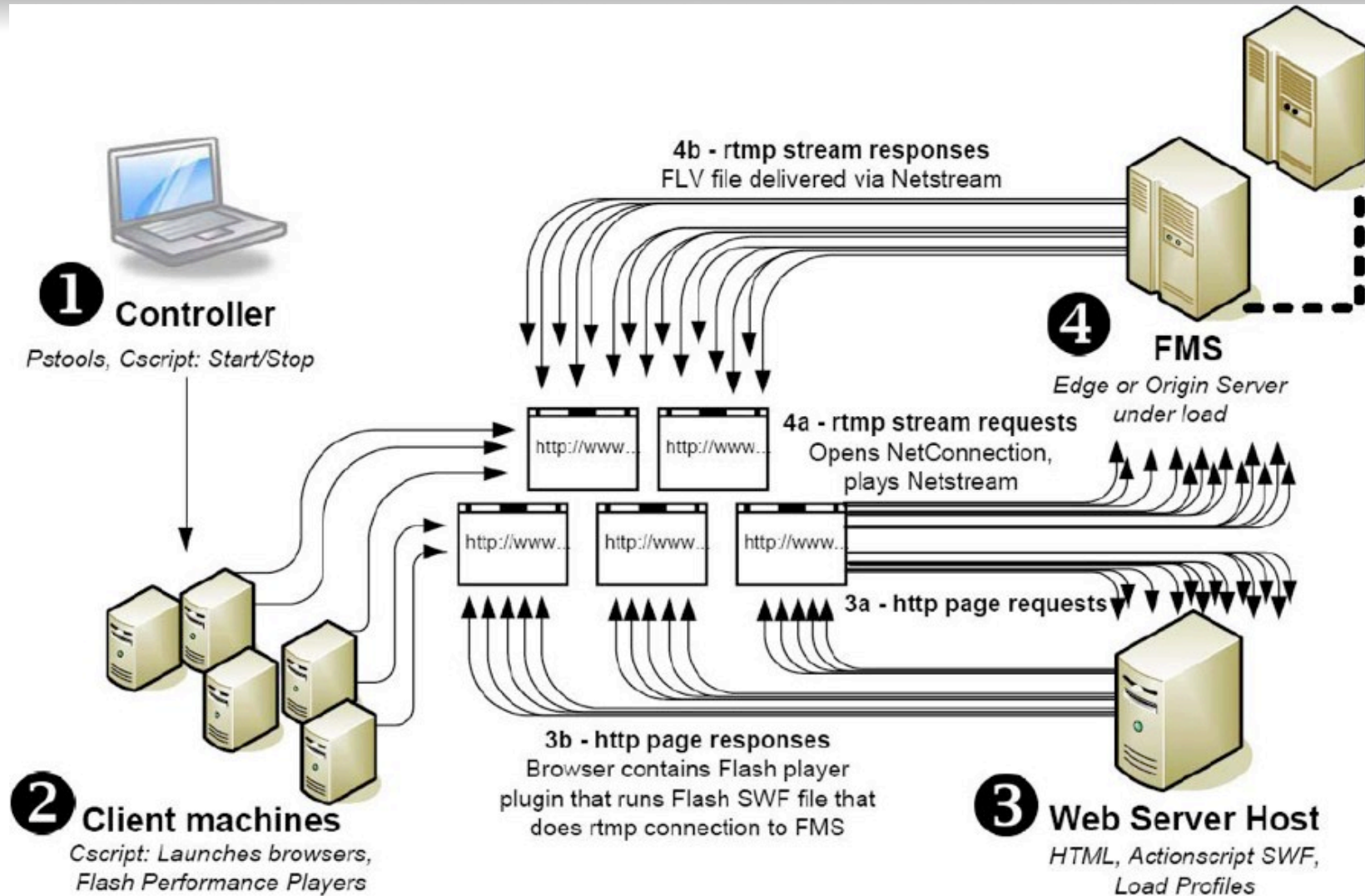
Server-to-client stream bytes

Server-to-client stream bytes [Export](#) | [Table Options](#)

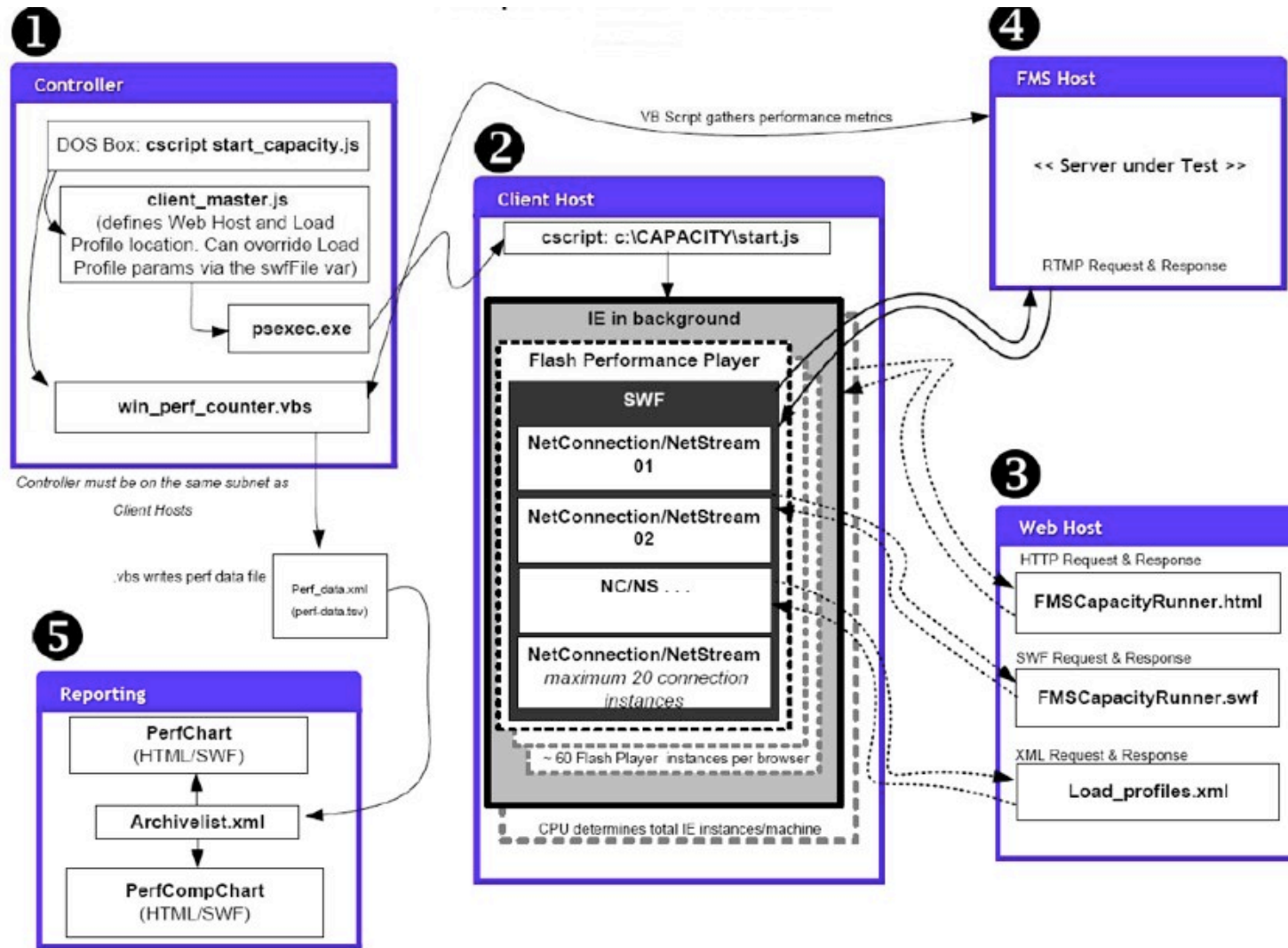
Row 1 - 10 of 66 > >>> Start row: Number of rows

	Server-to-client stream bytes	Hits	0 - 100 %	Page views	Visitors	Server-to-client bytes	Client-to-server bytes
1	2063563	25	16.9 %	0	1	127.60 M	90.20 k
2	462901	13	8.8 %	0	1	42.20 M	46.48 k
3	342	8	5.4 %	0	1	29.79 k	24.69 k
4	653491	7	4.7 %	0	1	31.73 M	26.19 k
5	350	7	4.7 %	0	1	25.89 k	21.65 k
6	1047137	4	2.7 %	0	1	16.56 M	14.59 k
7	1832972	4	2.7 %	0	1	22.16 M	14.92 k
8	1258555	4	2.7 %	0	1	13.07 M	13.86 k
9	919602	3	2.0 %	0	1	13.84 M	11.12 k
10	2063461	3	2.0 %	0	1	16.42 M	11.16 k
56 other items		70	47.3 %	0	-	160.37 M	1.17 M
Total		148	100 %	0	-	444.00 M	1.44 M

Loading Simulator模拟原理



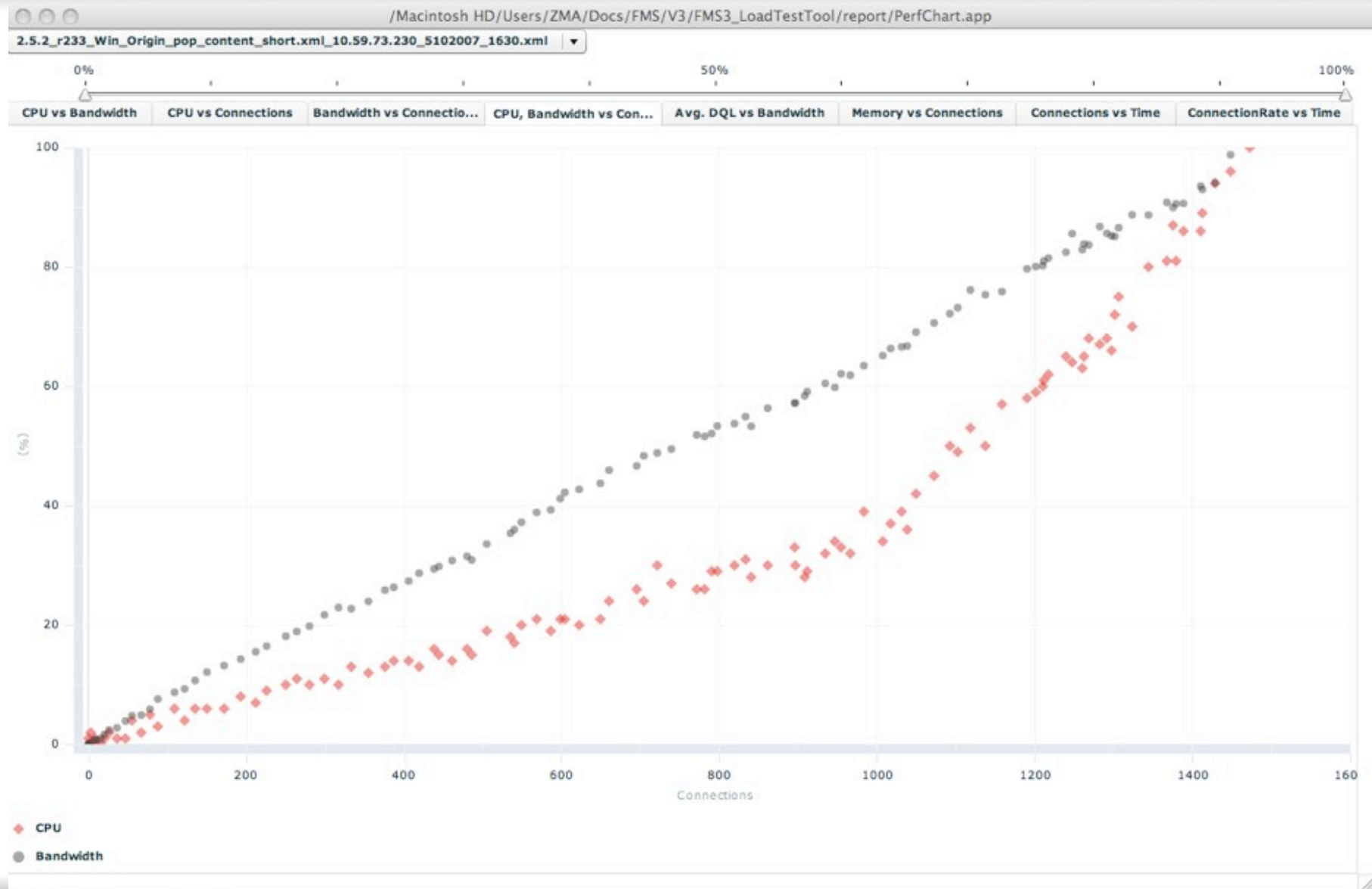
Loading Simulator 强化实现



Loading Simulator 监测数据

```
<RowData>
</RowData>
<RowData>
<Time>5</Time>
<DateTime>2008-3-27 20:33:52</DateTime>
<TotalCPU>3</TotalCPU>
<TotalMemory>709181440</TotalMemory>
<AvgDQL>0</AvgDQL>
<BandwidthIn>58176</BandwidthIn>
<BandwidthOut>53680</BandwidthOut>
<ConnectionsEstablished>14</ConnectionsEstablished>
<Connections>0</Connections>
<ConnectionRate>0</ConnectionRate>
<FMSCoreCPU>0</FMSCoreCPU>
<FMSCoreVirtualBytes>198582272</FMSCoreVirtualBytes>
<FMSCoreMemory>44097536</FMSCoreMemory>
<FMSCoreHandle>560</FMSCoreHandle>
<FMSCoreThread>93</FMSCoreThread>
<FMSEdgeCPU>0</FMSEdgeCPU>
<FMSEdgeVirtualBytes>95391744</FMSEdgeVirtualBytes>
<FMSEdgeMemory>10997760</FMSEdgeMemory>
<FMSEdgeHandle>341</FMSEdgeHandle>
<FMSEdgeThread>52</FMSEdgeThread>
</RowData>
<RowData>
```

Loading Simulator扩展图表



Q&A
THANKS