



KBEngine

WebConsole

Guide

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(—) Environment Configuration

1. Requirements

Python Version: Python3.X (recommended 3.3 or above)
Django Version: 1.8.9

2. Setup

- 1) First, install the matching Django module for Python. If you do not want to install Django, there are two options:
 - If you are using python2.6.6, enter into the "kbe/tools/server/django_packages" directory and extract the Django-1.6.11.tar.gz file (unzip to the current directory);
 - If you are using python2.7 or above, go to the "kbe/tools/server/django_packages" directory and extract the Django-1.8.9.tar.gz file (unzip to the current directory).
- 2) Modify sync_db.bat, sync_db.sh and run_server.bat, run_server.sh to match the path to the python you are using. On first run you need to initialize the data:

- python3.3 + django 1.8.9 under windows, run “sync_db.bat”
- python3.3 + django 1.8.9 under linux, run “sync_db.sh”;
- python2.6 + django 1.6.11 under linux, run “sync_db_dj-1.6.sh”;
- python2.6 + django 1.6.1 under windows, please refer to “sync_db_dj-1.6.sh” and build a .bat file.

(二) Operation Steps

1. Start the server

- Linux: Run the run_server.sh script, or deploy to nginx. In a browser, open “<http://xxx.xxx.xxx.xxx:8000/wc/>” for access where “xxx.xxx.xxx.xxx” is the Linux machine’s IP address;
- Windows: Run run_server.bat (make sure to change python folder in run_server.bat to your own python folder) and open “<http://xxx.xxx.xxx.xxx:8000/wc/>” in a web browser, where “xxx.xxx.xxx.xxx” is the machine’s IP address.

2. Login System

The initial login requires a default username and password to log in to the user management interface and create a new administrative user:

- When using the Web Console for the first time, the default login account is “Admin” and the default password is “123456”, this account is also the only background administrative account. Please promptly change your password after login.
- The first time you use the Admin account to enter the background, you need to create a server management account using your user account name and UID. After creating a new user account, log out of Admin and log into the new user.

- The background environment is python3.3 + django 1.8.9, and python2.6.6 + django-1.6.11 under linux. Tests passed.
- All functions of the Web Console are derived from the KBEngine server. Therefore, to use the functions of the console, it must be ensured that the server process runs correctly.
- If you have any questions, please ask them on the KBEngine official forum.

KBEngine web console

账 号

密 码

2-1-1 登录界面

(三) Server Management Functions

1. User Management

1) Account Management

On this page, you can manage users who use the Web Console, or manage Administrator accounts.

账号管理	ID	账号名	显示名	操作系统用户名	操作系统用户uid	kbe_root	kbe_res_path	kbe_bin_path	操作
新建账号	8	Admin	Admin	UNKNOWN	-1				修改资料 修改密码 删除

3-1-1-1 Account Management Interface

2) Management user creation

- Account name: Login account;
- Nickname: Displayed after login;
- Login password: Any combination of alphanumeric characters;
- Confirm password: Enter the password again;
- Operating System user: Linux system user name who is running KBE server. Please ignore under Windows.
- Operating System uid: Linux system user uid. Make sure to enter the uid of the user running KBE server, otherwise it cannot be managed. Please ignore under Windows.
- KBE_ROOT: The KBE_ROOT directory. Defaults to the root of the current Web Console. (can be empty)
- KBE_RES_PATH: The KBE_RES_PATH directory. Defaults to the root of the current Web Console. (can be empty)
- KBE_BIN_PATH: The KBE_BIN_PATH directory. Defaults to the root of the current Web Console. (can be empty)

Note: Because there can be multiple KBEs on a single server, each managed system uses User, UID, KBE_ROOT, KBE_RES_PATH, KBE_BIN_PATH and cannot be referenced by other users.

KBEngine控制台

账号管理

新建账号

添加新用户

账 号	<input type="text"/>
昵 称	<input type="text"/>
登 录 密 码	<input type="text"/>
确 认 密 码	<input type="text"/>
操作系 统用 户	<input type="text"/>
操作系 统用 户uid	<input type="text"/>
KBE_ROOT	<input type="text"/>
KBE_RES_PATH	<input type="text"/>
KBE_BIN_PATH	<input type="text"/>

3-1-2-1 New account

3) Modify user

Enter the new user properties and click OK to modify.

KBEngine控制台

ID	账号名	显示名	操作系 统用 户	操作系 统用 户uid	kbe_root	kbe_res_path	kbe_bin_path	操作
8	Admin	Admin						<input type="button" value="修改"/>
9	other	其他						<input type="button" value="修改"/>

账号编辑

修改账户

新 账 号	<input type="text" value="RM"/>
操作系 统用 户	<input type="text" value="csfs"/>
操作系 统用 户uid	<input type="text" value="519"/>
KBE_ROOT	<input type="text"/>
KBE_RES_PATH	<input type="text"/>
KBE_BIN_PATH	<input type="text"/>

3-1-3-1 Account editing

4) Change password

Enter the new password twice and click Modify.



3-1-4-1 Password Modification

2. Cluster Management

1) Server Management

In the “Server Management” page, you can manage and view resource consumption of started KBE processes.

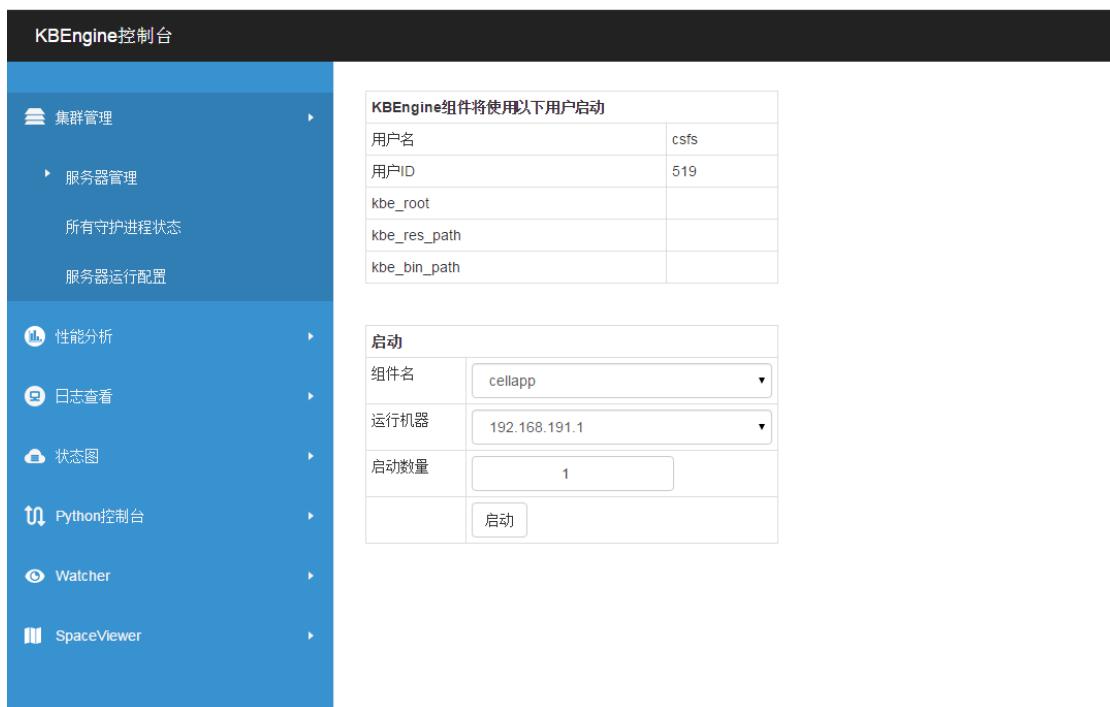
- STOP operation: Stop current process.
- KILL operation: Kill current process.
- Start new component: Start new KBE service or component.
- Stop the server: Stop the current KBE server and all processes.
- Save current server configuration: Save the current KBE server process configuration.

Machine	组件名称	uid	pid	cid	gid	gus	CPU负载	内存消耗比	内存消耗量	实体数量	Proxy实体数量	客户端数量	操作
192.168.191.1	baseappmgr	519	8572	62915000	1	5	0.00%	0.09%	15m	0	0	0	<button>STOP</button> <button>KILL</button>
192.168.191.1	cellappingmgr	519	6172	62916000	2	6	0.00%	0.09%	15m	0	0	0	<button>STOP</button> <button>KILL</button>
192.168.191.1	dbmgr	519	8560	62914000	4	4	0.00%	0.17%	28m	0	0	0	<button>STOP</button> <button>KILL</button>
192.168.191.1	cellapp1	519	9164	62918001	5	9	0.00%	0.69%	112m	1939	0	0	<button>STOP</button> <button>KILL</button>
192.168.191.1	logapp	519	7180	62919000	6	11	0.00%	0.14%	22m	0	0	0	<button>STOP</button> <button>KILL</button>
192.168.191.1	logger	519	8628	62912000	1	2	0.00%	0.14%	23m	0	0	0	<button>STOP</button> <button>KILL</button>
192.168.191.1	interfaces	519	8380	62913000	1	3	0.00%	0.17%	27m	0	0	0	<button>STOP</button> <button>KILL</button>

3-2-1-1 Server Management Interface

2) Start new component

On this page you can create any number of component processes within the server cluster.



3-2-2-1 Start new component interface

3) All daemon status

Here you can view machine information and resources for all KBE processes in the server cluster.

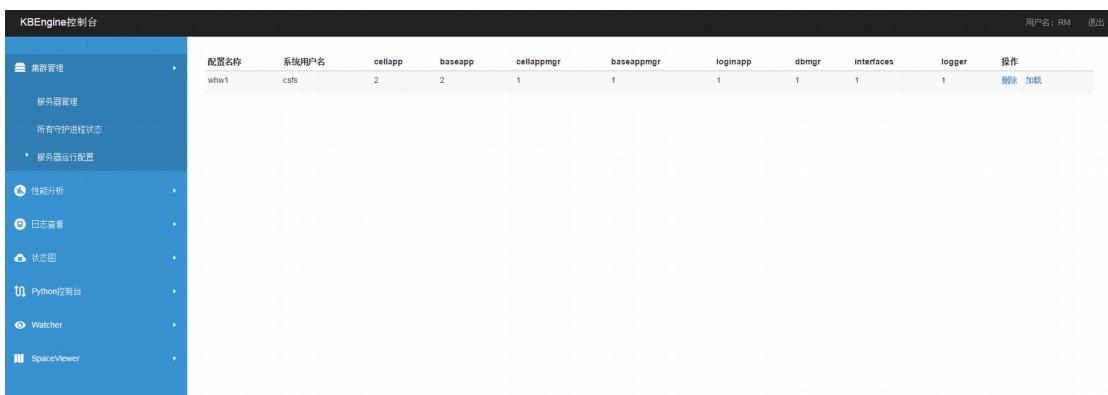
The screenshot shows the KBE Engine Control Panel. The sidebar includes Cluster Management, Server Management, All Daemon Status (selected), Performance Analysis, Log View, Status Diagram, Python Control Console, Watcher, and SpaceViewer. The main area displays a table of daemon status for machine 192.168.191.1. The table columns are: Machine, 组件名称 (Component Name), uid, pid, cid, gid, gus, CPU负载 (CPU Load), 内存消耗比 (Memory Consumption Ratio), 内存消耗数 (Memory Consumption Number), 实体数量 (Entity Quantity), Proxy实体数量 (Proxy Entity Quantity), and 客户端数量 (Client Quantity). The data in the table is as follows:

Machine	组件名称	uid	pid	cid	gid	gus	CPU负载	内存消耗比	内存消耗数	实体数量	Proxy实体数量	客户端数量
192.168.191.1	baseappmgr	519	8572	62915000	1	5	0.00%	0.09%	15m	0	0	0
192.168.191.1	cellappmgr	519	6172	62916000	2	6	0.32%	0.09%	15m	0	0	0
192.168.191.1	dbmgr	519	8560	62914000	4	4	0.00%	0.17%	28m	0	0	0
192.168.191.1	cellapp1	519	9164	62918001	5	9	4.51%	0.69%	112m	1939	0	0
192.168.191.1	baseapp1	519	7464	62917001	3	7	0.00%	0.25%	40m	121	2	1
192.168.191.1	loginapp	519	7180	62919000	6	11	0.00%	0.14%	22m	0	0	0
192.168.191.1	logger	519	8628	62912000	1	2	0.00%	0.14%	23m	0	0	0
192.168.191.1	interfaces	519	8380	62913000	1	3	0.00%	0.17%	27m	0	0	0

3-2-3-1 All daemon status

4) Server configurations

On this page you can load and delete previously saved server configurations.



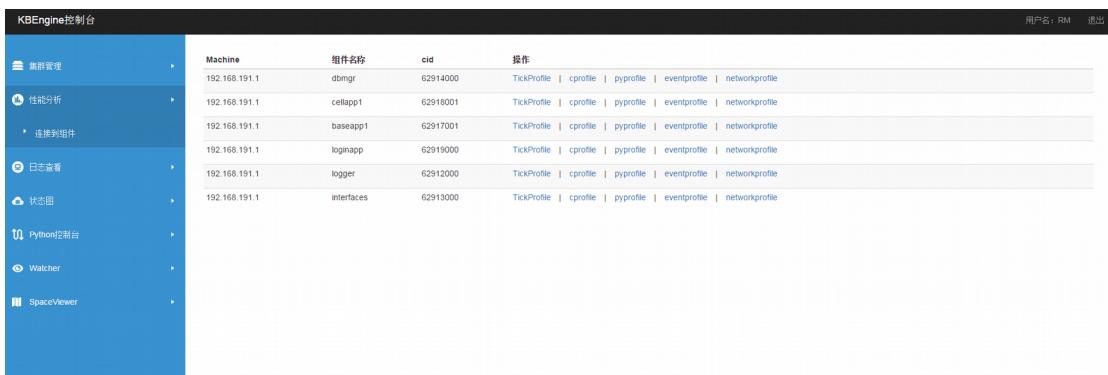
The screenshot shows the 'KBEngine控制台' (KBEngine Control Panel) interface. On the left is a sidebar with various monitoring and management options. The main area displays a table of server configurations:

配置名称	系统用户名	cellapp	baseapp	cellappmgr	baseappmgr	loginapp	dbmgr	interfaces	logger	操作
whw1	cstfs	2	2	1	1	1	1	1	1	删除 加载

3-2-4-1 Server configurations

3. Performance Analysis

Here you can select the component process you want to analyze.



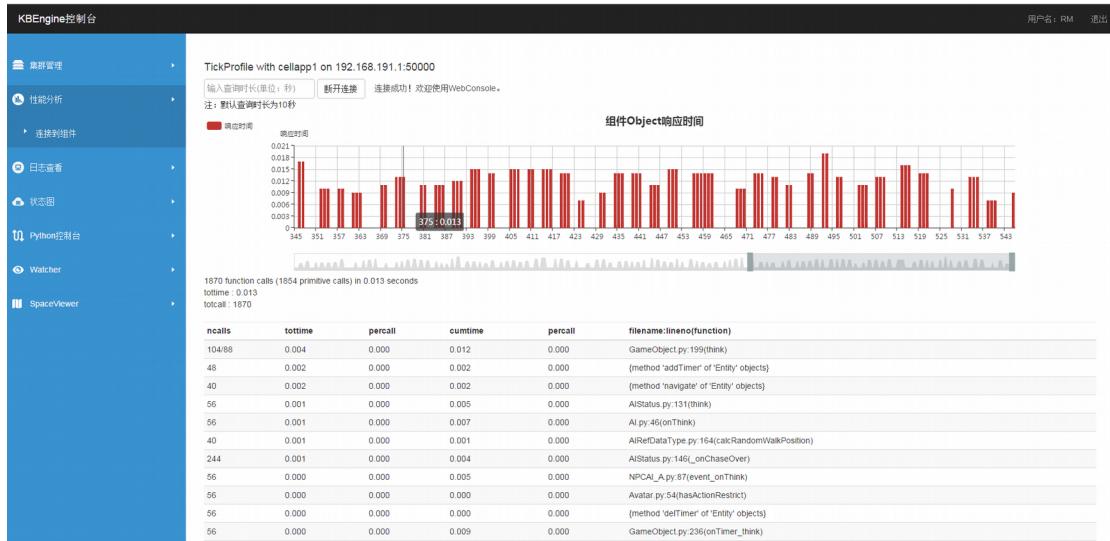
The screenshot shows the 'KBEngine控制台' (KBEngine Control Panel) interface. On the left is a sidebar with various monitoring and management options. The main area displays a table of component processes:

Machine	组件名称	cid	操作
192.168.191.1	dbmgr	62914000	TickProfile cprofile pyprofile eventprofile networkprofile
192.168.191.1	cellapp1	62918001	TickProfile cprofile pyprofile eventprofile networkprofile
192.168.191.1	baseapp1	62917001	TickProfile cprofile pyprofile eventprofile networkprofile
192.168.191.1	loginapp	62919000	TickProfile cprofile pyprofile eventprofile networkprofile
192.168.191.1	logger	62912000	TickProfile cprofile pyprofile eventprofile networkprofile
192.168.191.1	interfaces	62913000	TickProfile cprofile pyprofile eventprofile networkprofile

3-3-0-1 Component process selection screen

1) TickProfile

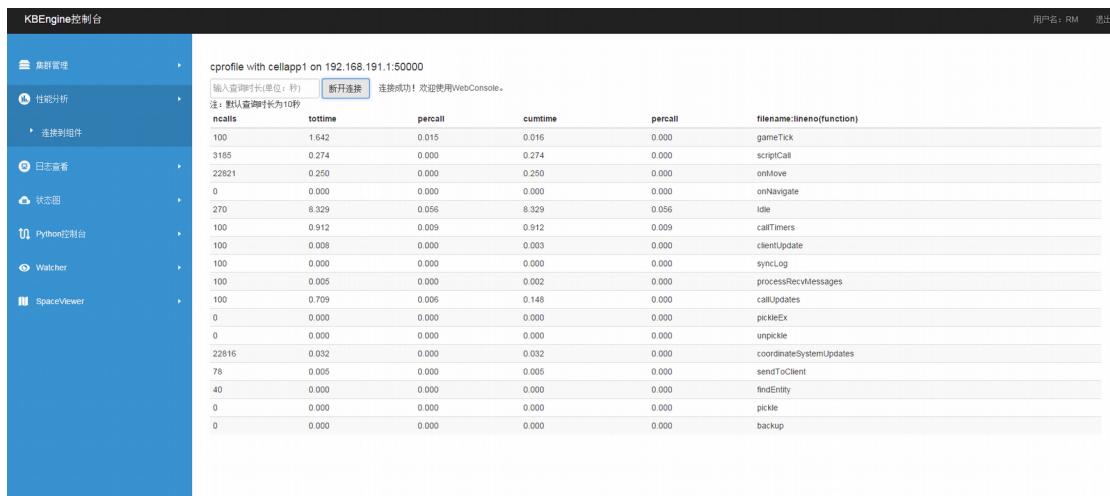
On this page you can query the tick profile. The query duration is empty, with a default length of 10 seconds. Click the bars on the graph to see details.



3-3-1-1 TickProfile screen

2) Cprofile

Here you can perform cprofile analysis queries. The query duration is empty with a default length of 10 seconds.



3-3-2-1 Cprofile screen

3) Pyprofile

Here you can perform pyprofile analysis queries. The query duration is empty with a default length of 10 seconds.

pyprofile with cellapp1 on 192.168.191.1:50000					
输入查询时长(单位: 秒) 断开连接 连接成功！欢迎使用WebConsole。					
name	tottime	percall	cumtime	percall	filename:lineno(function)
105000/380	0.303	0.000	0.938	0.000	GameObject.py:199(think)
5247	0.173	0.000	0.173	0.000	{method 'addTimer' of 'Entity' objects}
3133	0.117	0.000	0.117	0.000	{method 'navigate' of 'Entity' objects}
6253	0.098	0.000	0.404	0.000	AIStatus.py:131(think)
9253	0.075	0.000	0.562	0.000	AI.py:46(onThink)
3133	0.041	0.000	0.050	0.000	AIRefDataType.py:164(calcRandomWalkPosition)
25474	0.037	0.000	0.246	0.000	AIStatus.py:146(onChaseOver)
5253	0.035	0.000	0.438	0.000	NPCAI_A.py:67(event_onThink)
5253	0.027	0.000	0.027	0.000	{method 'defTimer' of 'Entity' objects}
5253	0.026	0.000	0.026	0.000	Avatar.py:54(hasActionRestrict)
5253	0.025	0.000	0.759	0.000	GameObject.py:236(onTimer,_think)
5253	0.023	0.000	0.023	0.000	Avatar.py:818(isDead)
22347	0.018	0.000	0.026	0.000	ECCBExtend.py:111(onMove)
8380	0.011	0.000	0.013	0.000	random.py:342(uniform)
5403	0.009	0.000	0.775	0.000	ECCBExtend.py:98(onTimer)
5253	0.006	0.000	0.568	0.000	NPC.py:77(onThink)
16766	0.003	0.000	0.003	0.000	{method 'random' of '_random Random' objects}
3127	0.003	0.000	0.244	0.000	ECCBExtend.py:131(onMoveOver)
25474	0.002	0.000	0.002	0.000	{built-in method callable}
5247	0.002	0.000	0.002	0.000	{time}
3133	0.002	0.000	0.002	0.000	{built-in method cos}

3-3-3-1 PyProfile screen

4) Eventprofile

Here you can analyze event profile information. The query duration is empty with a default length of 10 seconds.

eventprofile with cellapp1 on 192.168.191.1:50000		
输入查询时长(单位: 秒) 断开连接 连接成功！欢迎使用WebConsole。		
	count	size
Event Type PrivateClientEvents		
Player.pingBack	19	3
Player.triggerFightResultFS	17	3
Event Type PublicClientEvents		
Player.removeBuffFS	13	1
Player.seeSpellEffectFS	15	3
NPC.effectIStatus	9	1
NPC.actionRestrict	9	1
NPC_MP	4	7
NPC_direction	4	1
Player.updateBuffFS	15	8
Player.startSpellFS	4	7

3-3-4-1 EventProfile screen

5) Networkprofile

Here you can analyze network performance information. The query duration is empty with a default length of 10 seconds.

The screenshot shows the KBEEngine Control Panel interface. On the left, there's a sidebar with various monitoring tools: 集群管理 (Cluster Management), 性能分析 (Performance Analysis) which is currently selected, 连接到组件 (Connect to Component), 日志查看 (Log View), 状态图 (Status Diagram), Python控制台 (Python Console), Watcher, and SpaceViewer. The main content area is titled "networkprofile with cellapp1 on 192.168.191.1:50000". It includes a search bar, a note about the default query time being 10 seconds, and a table of network traffic data. The table has columns: name, sent#, size, avg, total#, totalsize, recv#, size, avg, total#, totalsize. The data shows several entries from "Cellapp: looApp" and other components like "Logger: writeLog" and "Cellapp: onAppActiveTick".

3-3-4-1 NetWorkProfile screen

4. Log View

1) Real-time log

This page provides real-time log viewing and filtering. Click on the arrow for a drop down filtering menu. Use this page to view log data from all KBEEngine processes.

The screenshot shows the KBEEngine Control Panel interface with the "Watcher" tool selected in the sidebar. The main area displays a real-time log viewer with a scrollable list of log entries. The log entries are timestamped and show messages from "Cellapp: looApp" and other components. The log entries are as follows:

```

DEBUG cellapp01:519:62918001 [2016-12-19 17:22:48.413] - Cellapp: looApp: 192.168.191.1:5801/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:48.020] - Cellapp: looApp: 192.168.191.1:5793/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:40.414] - Cellapp: looApp: 192.168.191.1:5750/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:42.813] - Cellapp: looApp: 192.168.191.1:5758/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:37.715] - Cellapp: looApp: 192.168.191.1:5729/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:43.114] - Cellapp: looApp: 192.168.191.1:5766/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:50.714] - Cellapp: looApp: 192.168.191.1:5809/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:45.719] - Cellapp: looApp: 192.168.191.1:5784/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:40.116] - Cellapp: looApp: 192.168.191.1:5742/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:58.822] - Cellapp: looApp: 192.168.191.1:5867/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:53.614] - Cellapp: looApp: 192.168.191.1:5833/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:56.214] - Cellapp: looApp: 192.168.191.1:5849/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:23:01.214] - Cellapp: looApp: 192.168.191.1:5880/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:51.012] - Cellapp: looApp: 192.168.191.1:5817/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:55.915] - Cellapp: looApp: 192.168.191.1:5841/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:58.517] - Cellapp: looApp: 192.168.191.1:5858/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:23:01.517] - Cellapp: looApp: 192.168.191.1:5888/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:22:53.314] - Cellapp: looApp: 192.168.191.1:5825/0/0
INFO cellapp01:519:62918001 [2016-12-19 17:23:04.767] - TelnetServer:onTelnetHandlerClosed: del handler(192.168.191.1:5468)
DEBUG cellapp01:519:62918001 [2016-12-19 17:23:04.120] - Cellapp: looApp: 192.168.191.1:5905/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:23:03.810] - Cellapp: looApp: 192.168.191.1:5897/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:23:06.515] - Cellapp: looApp: 192.168.191.1:5940/0/0
DEBUG cellapp01:519:62918001 [2016-12-19 17:23:06.817] - Cellapp: looApp: 192.168.191.1:5952/0/0

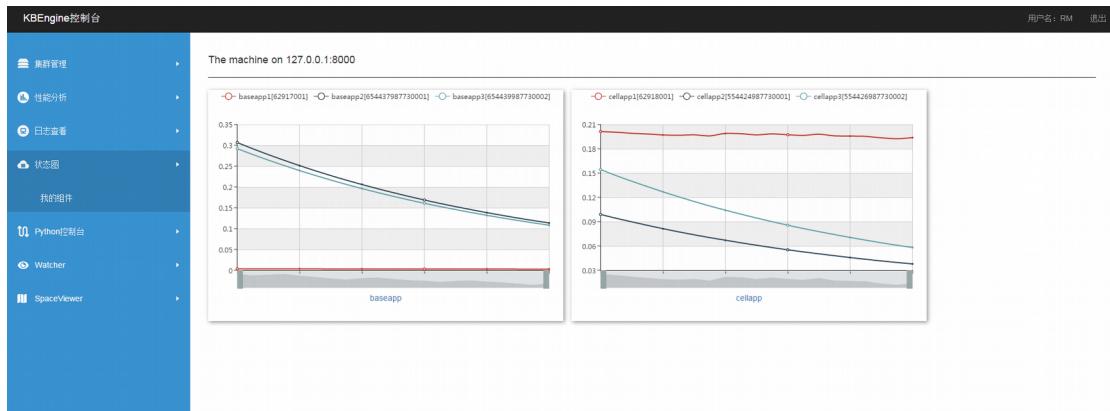
```

3-4-1-1 Real-time log interface

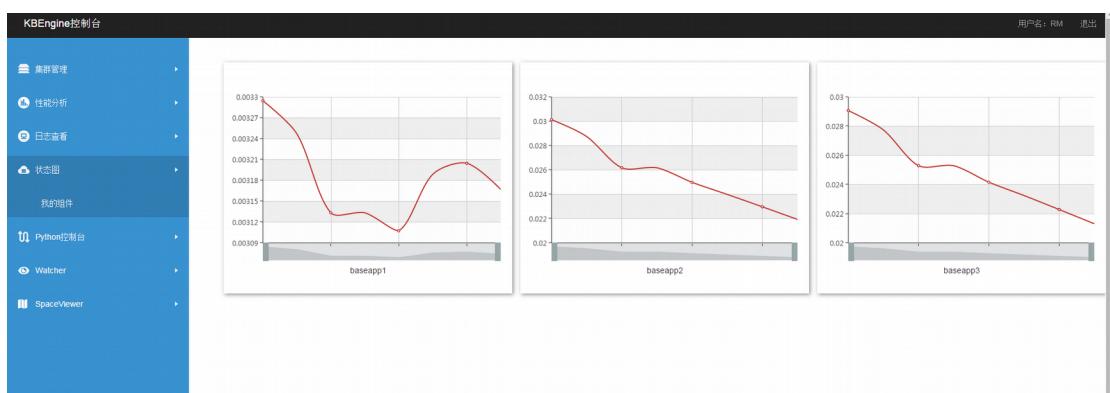
3-4-1-2 Real-time log filtering

5. State Diagram

The State Diagram page provides a linear chart of the current state of cellapp and baseapp. Click the name to see line graphs for each components individual processes.



3-5-1-1 Component overview page



3-5-1-2 Component processes page

6. Python Console

On this page you can connect a python console (through telnet) to a single process and enter commands to be executed by clicking the send button on the console page.

Machine	组件名称	cid	操作
192.168.191.1	dbmgr	62914000	连接到控制台
192.168.191.1	cellapp1	62918001	连接到控制台
192.168.191.1	cellapp2	554424987730001	连接到控制台
192.168.191.1	cellapp3	554426987730002	连接到控制台
192.168.191.1	baseapp1	62917001	连接到控制台
192.168.191.1	baseapp2	654437987730001	连接到控制台
192.168.191.1	baseapp3	654439987730002	连接到控制台
192.168.191.1	loginapp	62919000	连接到控制台
192.168.191.1	logger	62912000	连接到控制台
192.168.191.1	interfaces	62913000	连接到控制台

3-6-1-1 Python Console Process Selection Page

```
cellapp1 on 192.168.191.1:50000
连接成功! 欢迎使用WebConsole python 控制台>
password:kbe
welcome to cellapp
Version: 0.9.0. ScriptVersion: 0.1.0. Config: Debug. Built: 08:52:40 Nov 22 2016. AppID: 62918001. UID: 519. PID: 10376
-----
Command List:
[help] : list commands.
[quit] : quit the server.
[pyprof] : python profiler.
[cprofile] : collects and reports the internal c++ profiles of a server process over a period of time.
usage: "cprofile 30"
[pyprofile] : collects and reports the python profiles of a server process over a period of time.
usage: "pyprofile 30"
[eventprofile] : collects and reports the all non-volatile communication down to the client.
usage: "eventprofile 30"
[networkprofile] : collects and reports the network profiles of a server process over a period of time.
usage: "networkprofile 30"

-----
[cellapp@python -]>>>
[cellapp@python -]>>>

-----
```

3-6-1-2 Python Console Page

7. Watcher

The watcher provides developers with a single view of all the status information for a single component process (attributes, response speed, etc.) and updates the data to the process watcher page in real time.

Machine	进程名称	cid	操作
192.168.191.1	dbmgr	62914000	连接到控制台
192.168.191.1	celapp1	62918001	连接到控制台
192.168.191.1	celapp2	554424987730001	连接到控制台
192.168.191.1	celapp3	554426987730002	连接到控制台
192.168.191.1	baseapp1	62917001	连接到控制台
192.168.191.1	baseapp2	654437997730001	连接到控制台
192.168.191.1	baseapp3	654439987730002	连接到控制台
192.168.191.1	logapp	62919000	连接到控制台
192.168.191.1	logger	62912000	连接到控制台
192.168.191.1	interfaces	62913000	连接到控制台

3-7-1-1 Watcher Process Selection Page

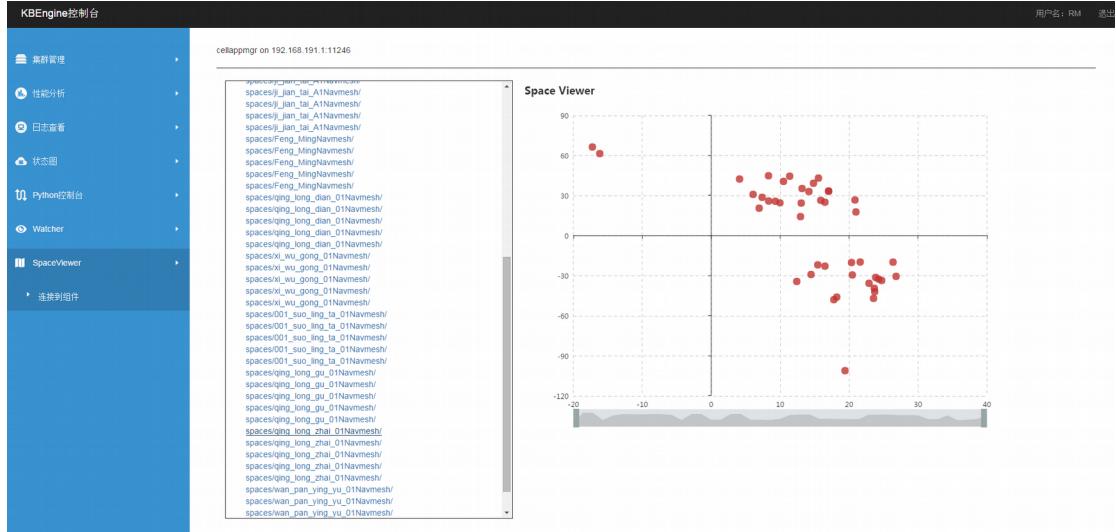
属性 (Properties)	变量 (Variables)
recvAvgSize	0
recvCount	0
id:	10
len:	-1
sentSize	0
sentCount	0
recvSize	0
sentAvgSize	0

3-7-1-2 Watcher Operation Page

8. SpaceViewer

In SpaceViewer, you can see the distribution of entities in all Spaces in the game. The space list on the left is updated as new spaces are created. The selected Space is displayed in real time on the right, showing its state and distribution.

Note: Since the size of the space map cannot be obtained independently, the value of the XY axis of the SpaceViewer is determined by the maximum X and Y values of all entities.



3-8-1-1 SpaceView Page