



**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 login 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



The image shows the login interface for the KBEngine web console. It features two input fields: one for '账号' (Account) and one for '密码' (Password). Below these fields is a '登录' (Login) button.

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.



The image shows the Account Management interface for the KBEngine web console. It displays a table with columns: Id, 账号名 (Account Name), 显示名 (Display Name), 操作系统用户名 (Operating System Username), 操作系统用户Uid (Operating System User Uid), kbe\_root, kbe\_res\_path, kbe\_bin\_path, and 操作 (Operations). A single row is shown for an account with Id 8, Account Name Admin, Display Name Admin, OS Username UNKNOWN, OS User Uid -1, and paths kbe\_root, kbe\_res\_path, kbe\_bin\_path. At the bottom right of the table are three buttons: '修改资料' (Modify Information), '修改密码' (Modify Password), and '删除' (Delete).

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.

KBE Engine Control Panel

账号管理

新建账号

添加新用户

账 号	
昵 称	
登 录 密 码	
确 认 密 码	
操作系 统用 户	
操作系 统用 户uid	
KBE_ROOT	
KBE_RES_PATH	
KBE_BIN_PATH	

添加

3-1-2-1 New account

### 3) Modify user

Enter the new user properties and click OK to modify.

修改账户

新 命 名	RM
操作系 统用 户	cstc
操作系 统用 户uid	519
KBE_ROOT	
KBE_RES_PATH	
KBE_BIN_PATH	

保存 取消 恢复密码 取消密码 删除 确认修改

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.

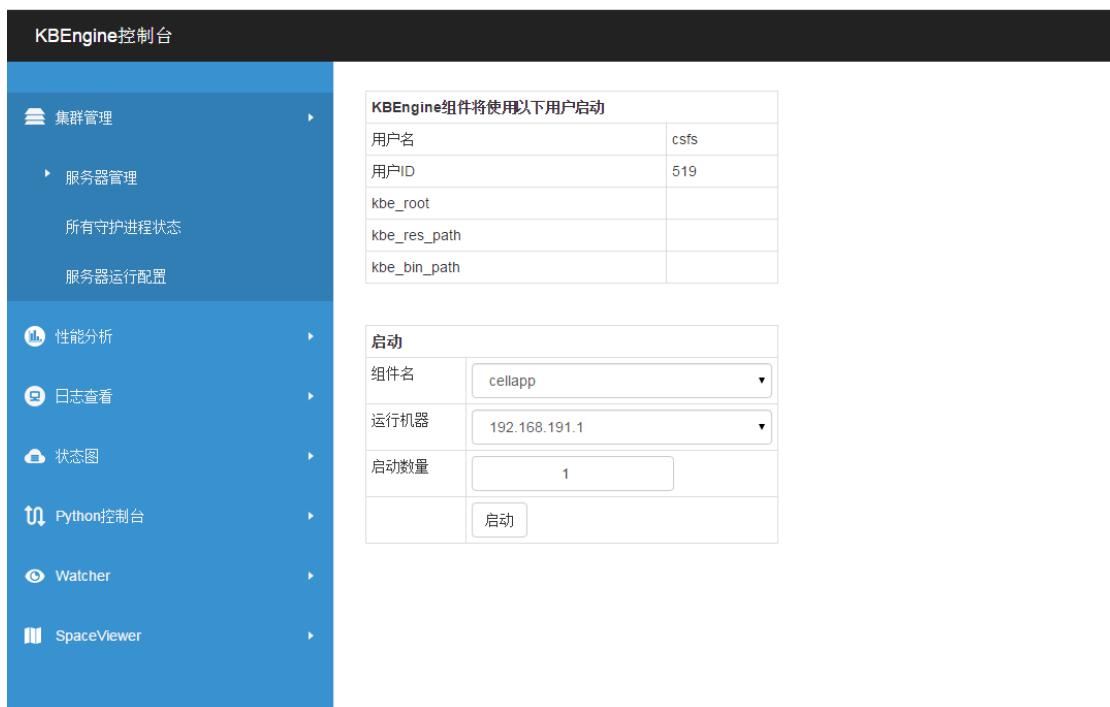
- STOP operation: Stop current process.
- KILL operation: Kill current process.
- Start new component: Start new KBE service or component.
- Stop the server: Stop the current KBE server and all processes.
- Save current server configuration: Save the current KBE server process configuration.

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

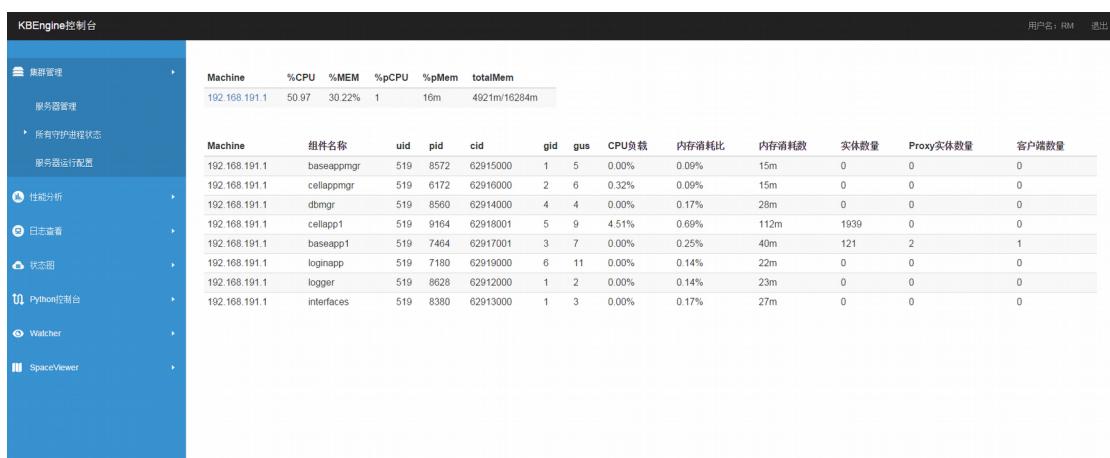
On this page you can create any number of component processes within the server cluster.



3-2-2-1 Start new component interface

## 3) All daemon status

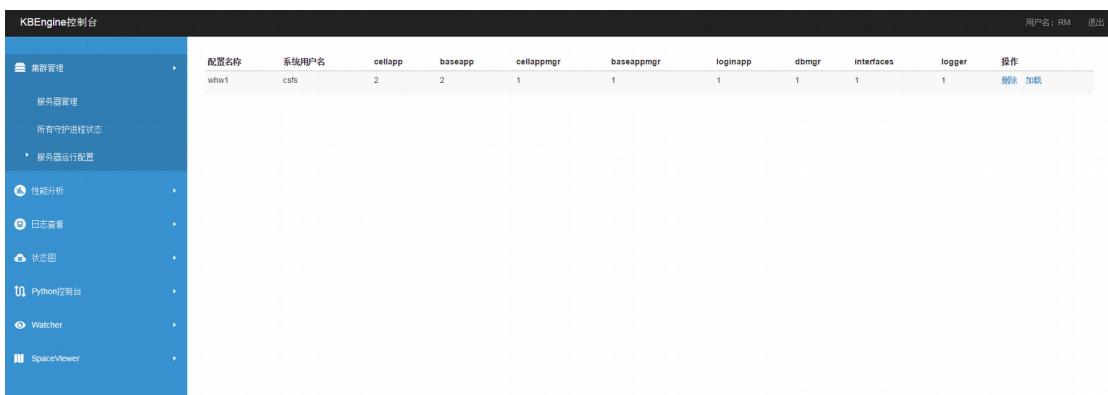
Here you can view machine information and resources for all KBE processes in the server cluster.



3-2-3-1 All daemon status

## 4) Server configurations

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



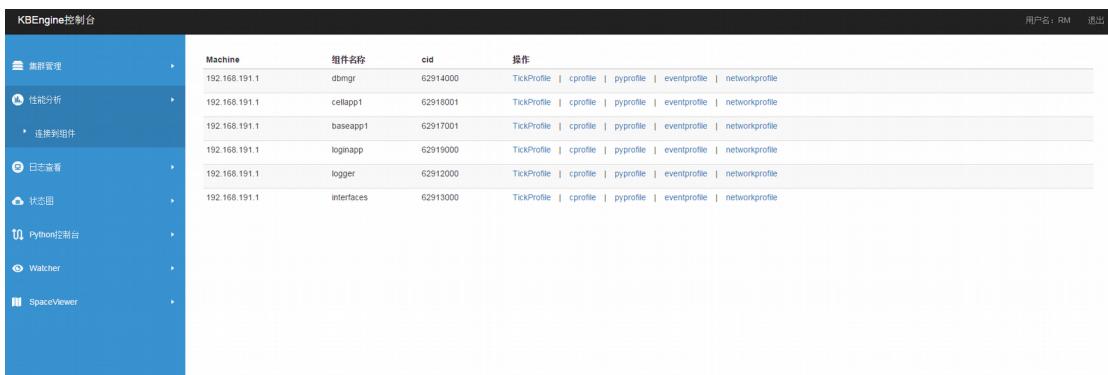
The screenshot shows the 'KBEngine控制台' (KBEngine Control Panel) interface. On the left is a sidebar with various monitoring and management options. The main area displays a table of server configurations:

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	<a href="#">删除</a> <a href="#">加载</a>

3-2-4-1 Server configurations

## 3. Performance Analysis

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



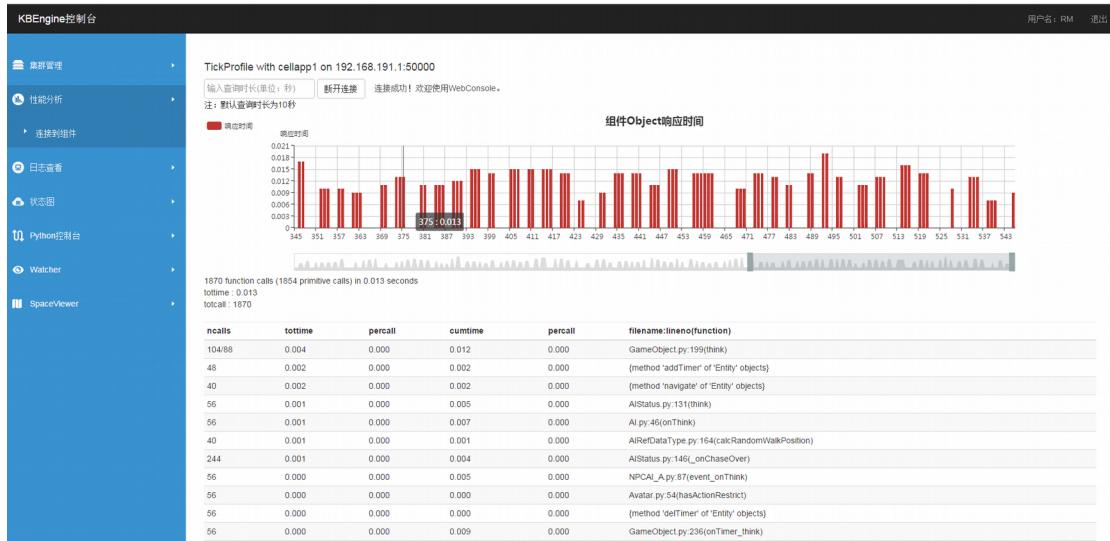
The screenshot shows the 'KBEngine控制台' (KBEngine Control Panel) interface. On the left is a sidebar with various monitoring and management options. The main area displays a table of component processes:

Machine	组件名称	cid	操作
192.168.191.1	dbmgr	62914000	<a href="#">TickProfile</a> <a href="#">cprofile</a> <a href="#">pyprofile</a> <a href="#">eventprofile</a> <a href="#">networkprofile</a>
192.168.191.1	cellapp1	62918001	<a href="#">TickProfile</a> <a href="#">cprofile</a> <a href="#">pyprofile</a> <a href="#">eventprofile</a> <a href="#">networkprofile</a>
192.168.191.1	baseapp1	62917001	<a href="#">TickProfile</a> <a href="#">cprofile</a> <a href="#">pyprofile</a> <a href="#">eventprofile</a> <a href="#">networkprofile</a>
192.168.191.1	loginapp	62919000	<a href="#">TickProfile</a> <a href="#">cprofile</a> <a href="#">pyprofile</a> <a href="#">eventprofile</a> <a href="#">networkprofile</a>
192.168.191.1	logger	62912000	<a href="#">TickProfile</a> <a href="#">cprofile</a> <a href="#">pyprofile</a> <a href="#">eventprofile</a> <a href="#">networkprofile</a>
192.168.191.1	interfaces	62913000	<a href="#">TickProfile</a> <a href="#">cprofile</a> <a href="#">pyprofile</a> <a href="#">eventprofile</a> <a href="#">networkprofile</a>

3-3-0-1 Component process selection screen

### 1) TickProfile

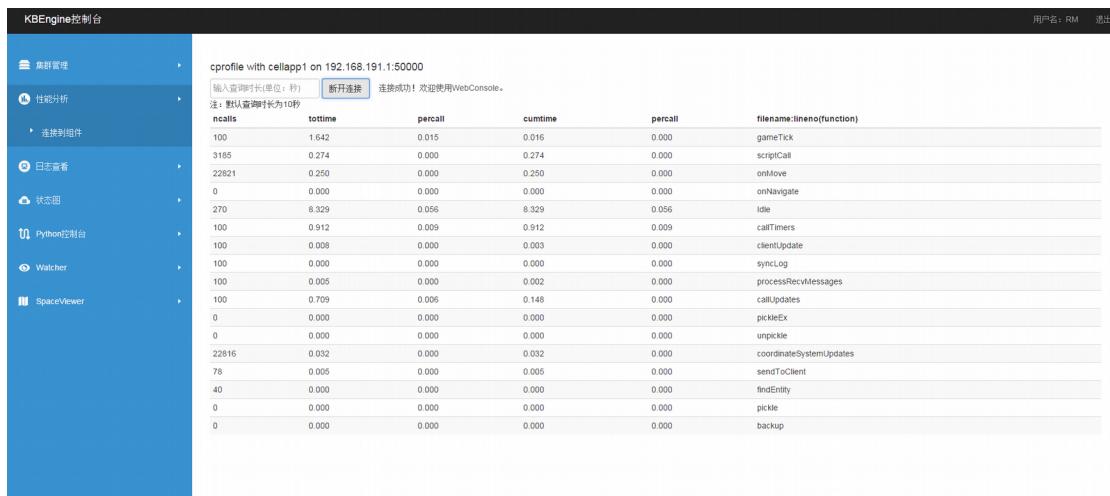
On this page you can query the tick profile. The query duration is empty, with a default length of 10 seconds. Click the bars on the graph to see details.



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。	
		注：默认查询时长为10秒			
		name	tottime	percall	cumtime
		050000380	0.303	0.000	0.308
		5247	0.173	0.000	0.173
		3133	0.117	0.000	0.117
		6253	0.098	0.000	0.404
		9253	0.075	0.000	0.562
		3133	0.041	0.000	0.050
		25474	0.037	0.000	0.246
		5253	0.035	0.000	0.438
		5253	0.027	0.000	0.027
		5253	0.026	0.000	0.026
		5253	0.025	0.000	0.759
		5253	0.023	0.000	0.023
		22347	0.018	0.000	0.026
		8380	0.011	0.000	0.013
		5403	0.009	0.000	0.775
		5253	0.006	0.000	0.568
		16766	0.003	0.000	0.003
		3127	0.003	0.000	0.244
		25474	0.002	0.000	0.002
		5247	0.002	0.000	0.002
		3133	0.002	0.000	0.002

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.

		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: Cluster Management, Performance Analysis (selected), Connection Group, Log Monitoring, Status Map, Python Control Panel, Watcher, and SpaceViewer. The main content area is titled "networkprofile with cellapp1 on 192.168.191.1:50000". It includes a search bar and a note about the default query time being 10 seconds. Below is a table with columns: name, sent#, size, avg, total#, totalsize, recv#, size, avg, total#, totalsize. The table lists several entries, such as Cellapp: looApp, Cellappmgr: updateCellapp, Logger: writeLog, and Cellapp: onAppActiveTick.

3-3-4-1 NetWorkProfile screen

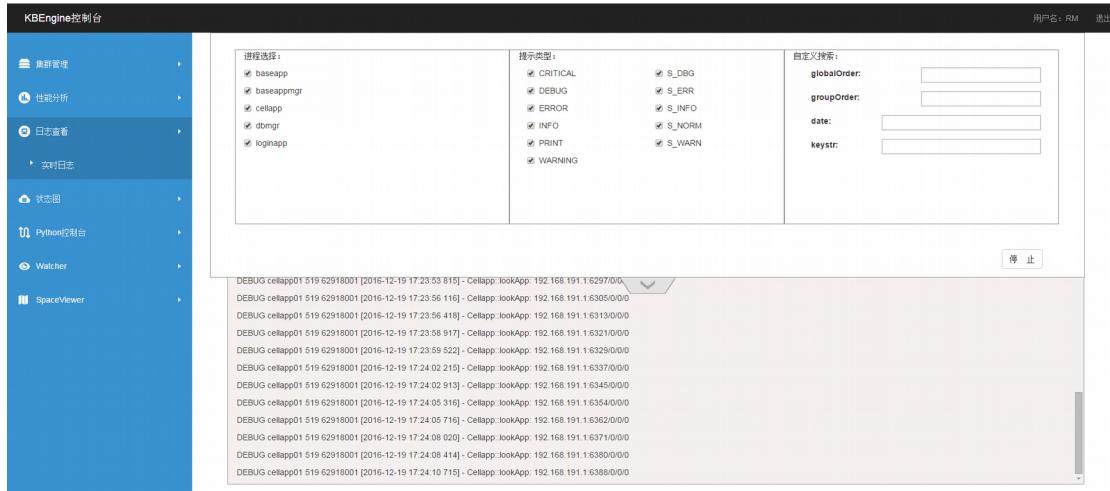
## 4. Log View

### 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 same sidebar as the previous screen. The main content area is titled "Real-time log" and displays a large scrollable window filled with log entries. The log entries are timestamped and show various DEBUG and INFO level messages from processes like cellapp01, including file paths and line numbers.

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



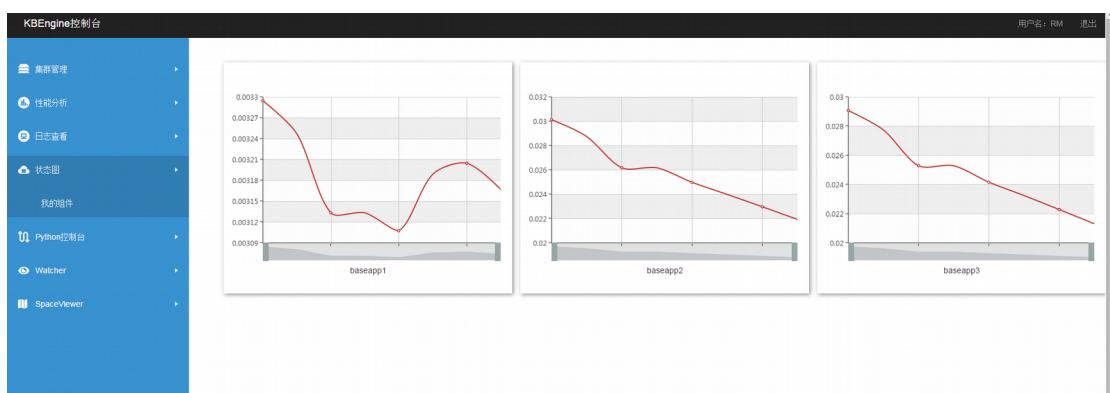
3-4-1-2 Real-time log filtering

## 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.

The screenshot shows the KBE Engine Control Panel interface. On the left is a sidebar with the following menu items:

- 集群管理
- 性能分析
- 日志查看
- 状态图
- Python控制台
- 连接到组件
- Watcher
- SpaceViewer

The main content area displays a table of component processes:

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

The screenshot shows the KBE Engine Control Panel interface. On the left is a sidebar with the following menu items:

- 集群管理
- 性能分析
- 日志查看
- 状态图
- Python控制台
- 连接到组件
- Watcher
- SpaceViewer

The main content area displays a terminal-like window for the Python console:

```
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.
[python] : python interpreter.
[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] : a server process over a period of time.
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"

-----
[celapp@python -]>>>
[celapp@python -]>>>

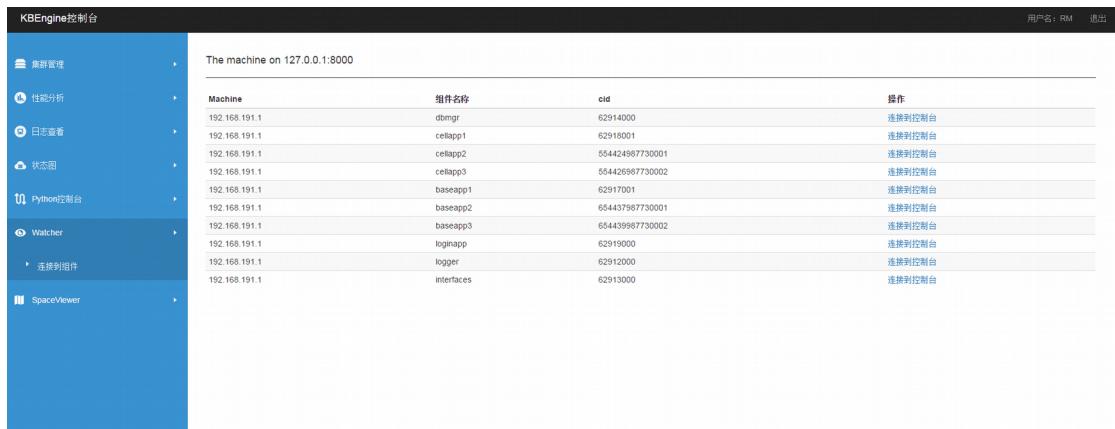
kbe
```

At the bottom, there is a text input field with the placeholder "kbe" and a "执行" (Execute) button.

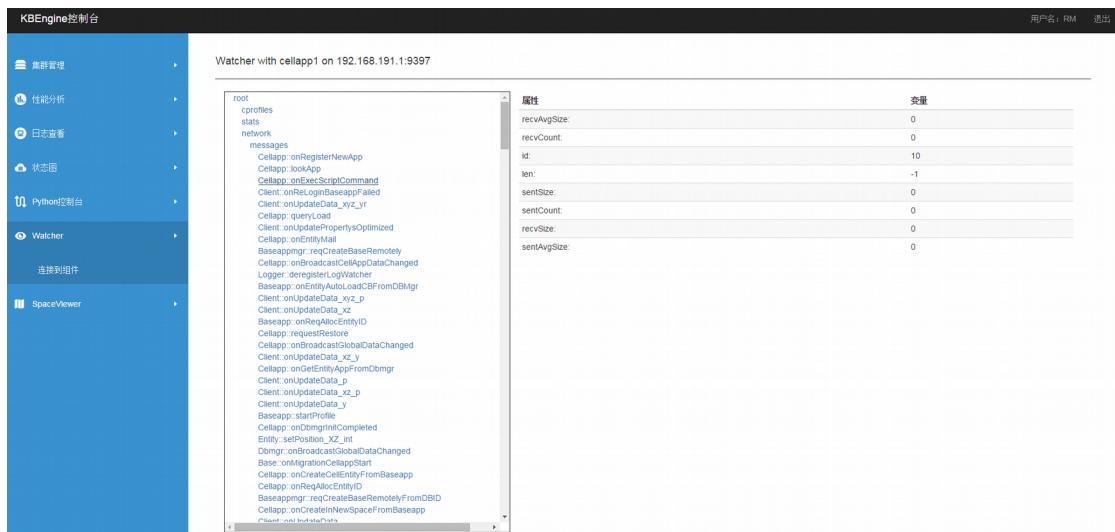
3-6-1-2 Python Console Page

## 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.



3-7-1-1 Watcher Process Selection Page

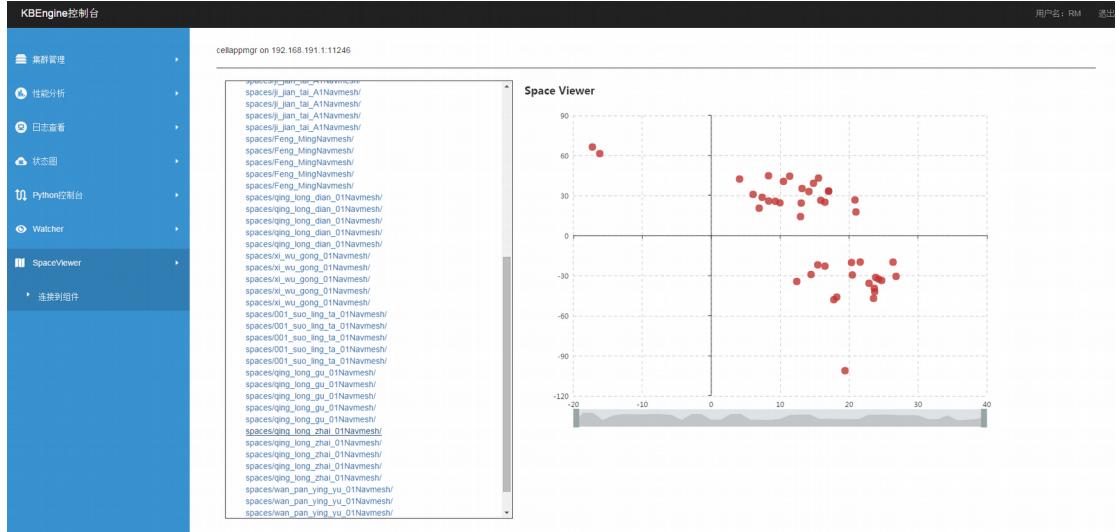


3-7-1-2 Watcher Operation Page

## 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