**City Guard**

**Restful Interface Definitions**

# Authentication

Junkops Rest Service has to prevent unauthenticated or invalid access, so a pair of ***User Name*** and ***Password*** is used to authenticate each query.

Client should provide a Security Code by:

1. Generating HMAC\_SHA1 for the url message with password as the key.
2. Encode the HMAC\_SHA1 by Base64.

About HMAC algorithm, please refer to: [en.wikipedia.org/wiki/HMAC](http://en.wikipedia.org/wiki/HMAC)

About Base64 encode, please refer to: [en.wikipedia.org/wiki/Base64](http://en.wikipedia.org/wiki/Base64)

About url message, see details:

For each HTTP request, no matter using method GET or POST, it is necessary to append parameters “UserName” and “SecurityCode” to the original URL, its format is:

*http://host:port/resource-URI +* ***&UserName=xxx&SecurityCode=xxx***

This whole URL was generated by the following steps:

1. The original URL is: *http://host:port/resource-URI*

e.g.: query by app SHA1

*http://196.1.1.16:8080/app/tmmi?0101=0005A15241FC0C15FD7BB0772EF318735E29079C*

1. Generate HMAC signature: HMAC (**/resource-URI + username**), key is the **password**.

* Using the first examples above, username: *admin*, password: *adminpsw*, then

*byte[] hmac = HMAC\_SHA1(”adminpsw”,“/app/tmmi?0101=0005A15241FC0C15FD7BB0772EF318735E29079Cadmin”)*

*String securityCode = encodeBase64( hmac )*

1. Construct the new URL:

* The original URL already has parameters, so the new URL will be:

*String newUrl = url +*

*"&UserName=" + URLEncoder.encode( userName, "UTF-8" ) +*

*"&SecurityCode="+ URLEncoder.encode( securityCode, "UTF-8" );*

For example:

Original URL:

*http://196.1.1.16:8080/app/tmmi?0101=0005A15241FC0C15FD7BB0772EF318735E29079C*

New URL:

*http://196.1.1.16:8080/app/tmmi?0101=0005A15241FC0C15FD7BB0772EF318735E29079C&UserName=admin&SecurityCode=yhTcGI9FI5CjiVHi%2Fpik%2F5sfcfg%3D*

# 2. Interface between portal and server

## User:

## Get All User Info

|  |  |
| --- | --- |
| http method | GET |
| url | /console/user/show\_all.bin |
| request |  |
| response | {  “error\_code”: 1,  “message”: “success”,  “data”: [  {  “name”: “admin”,  “password” : “xxxx”,  “email”: “[admin@yourcompany.com](mailto:admin@yourcompany.com)”,  “last\_modified\_time”: “2014-11-19 12:00:00”,  “role”: 1  },  {  “user\_name”: “test1”,  “password” : “xxxx”,  “email”: “[test1@yourcompany.com](mailto:test1@yourcompany.com)”,  “last\_modified\_time”: “2014-11-19 12:00:00”,  “role”: 2  }  ]  }  Or:  {  “error\_code”: 200,  “message”: “failed”  } |
| comment | Role:  1: admin  2: operator  3: viewer |

## Get One User Info

|  |  |
| --- | --- |
| http method | GET |
| url | /console/user/show.bin?account=xxx |
| request | Param:  Account: user name |
| response | {  “error\_code”: 1,  “message”: “success”,  “data”: {  “user\_name”: “admin”,  “password” : “xxxx”,  “email”: “[admin@yourcompany.com](mailto:admin@yourcompany.com)”,  “last\_modified\_time”: “2014-11-19 12:00:00”,  “role”: 1  }  }  Or:  {  “error\_code”: 200,  “message”: “failed”  } |
| comment |  |

## Add User Account

|  |  |
| --- | --- |
| http method | POST |
| url | /console/user/add.bin |
| request | body:  {  “user\_name”: “admin”,  “password”: “admin”,  “email”: “admin@yourcompany.com”  “role”: 1  } |
| response | {  “error\_code”: 1,  “message”: “success”  }  Or:  {  “error\_code”: -1,  “message”: “failed”  } |
| comment |  |

## Edit User Account

|  |  |
| --- | --- |
| http method | POST |
| url | /console/user/edit.bin |
| request | body:  {  “user\_name”: “admin”,  “password”: “admin”,  “email”: “admin@yourcompany.com”,  “role”: 1  } |
| response | {  “error\_code”: 1,  “message”: “success”  }  Or:  {  “error\_code”: -1,  “message”: “failed”  } |
| comment |  |

## Change User Password

|  |  |
| --- | --- |
| http method | POST |
| url | /console/user/change\_password.bin |
| request | body:  {  “user\_name”: “admin”,  “password”: “admin”,  } |
| response | {  “error\_code”: 1,  “message”: “success”  }  Or:  {  “error\_code”: -1,  “message”: “failed”  } |
| comment |  |

## Delete User Account

|  |  |
| --- | --- |
| http method | POST |
| url | /console/user/delete.bin |
| request | body:  {  “user\_name”: “admin”,  } |
| response | {  “error\_code”: 1,  “message”: “success”  }  Or:  {  “error\_code”: -1,  “message”: “failed”  } |
| comment |  |

## Login

|  |  |
| --- | --- |
| http method | POST |
| url | /console/user/login.bin |
| request | body:  {  “user\_name”: “admin”,  “password”: “admin”  } |
| response | http header:  Set-Cookie: session\_info=e09a586b-5102-4d56-aeb3-3cfe080d2f98  {  “error\_code”: 1,  “message”: “success”,  “data”: {  “role”: 1  }  }  Or:  {  “error\_code”: -1,  “message”: “failed”  } |
| comment | error\_code:  500: Login failed with wrong username/password |

## Logout

|  |  |
| --- | --- |
| http method | POST |
| url | /console/user/logout.bin |
| request |  |
| response | {  “error\_code”: 1,  “message”: “success”  } |
| comment |  |

**Report**:

## Query All Reports Count

|  |  |
| --- | --- |
| http method | GET |
| url | /console/report/query\_all\_count.bin |
| request |  |
| response | {  “error\_code”: 1,  “count” : 10  }  Or:  {  “error\_code”: -1,  }  error\_code:  -1 -- Error |
| comment |  |

## Get some Reports

## Get One Latest Report

|  |  |
| --- | --- |
| http method | GET |
| url | /console/report/get\_one\_latest.bin |
| request |  |
| response | {  “error\_code”: 1,  “message”: “success”  “data”: {  “user”: “mike”.  “msg”:”fire on the square”  }  }  Or:  {  “error\_code”: 400,  “message”: “failed”  }  error\_code:  -1 -- Error |
| comment | *“dir\_type”:*  *0 : not defined*  *1 : can be cleaned*  *2: carefully clean* |

## Get some Reports

|  |  |
| --- | --- |
| http method | POST |
| url | /console/report/get\_reports.bin |
| request | {  “position”: 0,  “count”: 20  } |
| response | {  “error\_code”: 1,  “message”: “success”  “data”: {  “position”: 0,  “count”: 20,  “reports”: [  {  “user”: “mike”,  “msg”: “come on, baby”,  “time”: “2014-11-19 12:00:00”  },  {  “user”: “qianglu”,  “msg”: “come on, girl”,  “time”: “2014-11-19 12:01:00”  }]  }  } |
| comment |  |

## Get One Report By User

|  |  |
| --- | --- |
| http method | GET |
| url | /console/report/get\_report\_by\_user.bin?account=xxxxxx |
| request |  |
| response | {  “error\_code”: 1,  “message”: “success”  “data”: {  “user”: “mike”,  “msg”: “come on, baby”,  “time”: “2014-11-19 12:00:00”  }  }  Or:  {  “error\_code”: 400,  “message”: “failed”  }  error\_code:  -1 -- Error |
| comment |  |

# 3.Interface between device and server

## Upload Report

|  |  |
| --- | --- |
| http method | POST |
| url | /device/upload\_report.bin |
| request | param: user  *example:*  */device/upload\_report.bin?user=n7*  *Body:*  *{*  *//TODO*  *}* |
| response | {  “error\_code”: 1,  }  error\_code:  1 -- Success  0 -- Error |
| comment |  |

## Upload Device Status

|  |  |
| --- | --- |
| http method | POST |
| url | **/device/upload\_device\_status.bin** |
| request | {  “id” : 12345,  “name” : “N7”,  “mode” : 1,  } |
| response | {  “error\_code”: 1  }  error\_code:  1 -- Success  0 -- Error |
| comment | *MODE:*  *1: WIFI*  *2: BLUETOOTH*  *4: 3G/4G* |