

# API USERMANUAL

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## BioTime 9.5

Date: **MAY 2026**

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## API Description

**BioTime 8.5 API** is dedicated to the platform data connection for the third-party system. The third-party system can read and set business data flexibly, which effectively reduces the complexity of the third-party system business integration and provides convenient, fast standard connection mode and data structure.

### 1. Get System User AuthToken

There are two kinds of auth token for software system user: JWT auth token and general auth token.

#### 1.1 Get JWT AuthToken

##### (1) Request Instruction

<b>HTTPS Method</b>	POST
<b>URI</b>	/jwt-api-token-auth/
<b>Content Type</b>	application/json
<b>Response Type</b>	JSON
<b>Parameter Description</b>	username: string, is required, the username to login the system. password: string, is required, the password to login the system.
<b>Request Herders</b>	{ "Content-Type":"application/json" }
<b>Request Body</b>	{ "username":"username", "password":"pwd" }

##### (2) How to GetToken

1) Get token via browser, input the following link in the browser:

<http://serverIP:serverPort/api/docs/#jwt-api-token-auth>

**serverIP:** BioTime 8.5 server or computer IP, such as: 192.168.218.8

**serverPort:** The server port of BioTime 8.5, such as: 8090



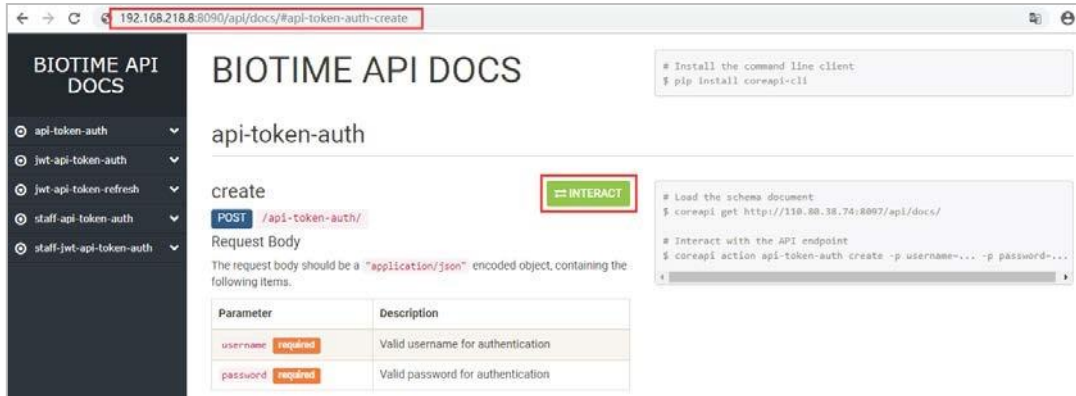
## (2) How to GetToken

1) Get token via browser, input the following link in the browser:

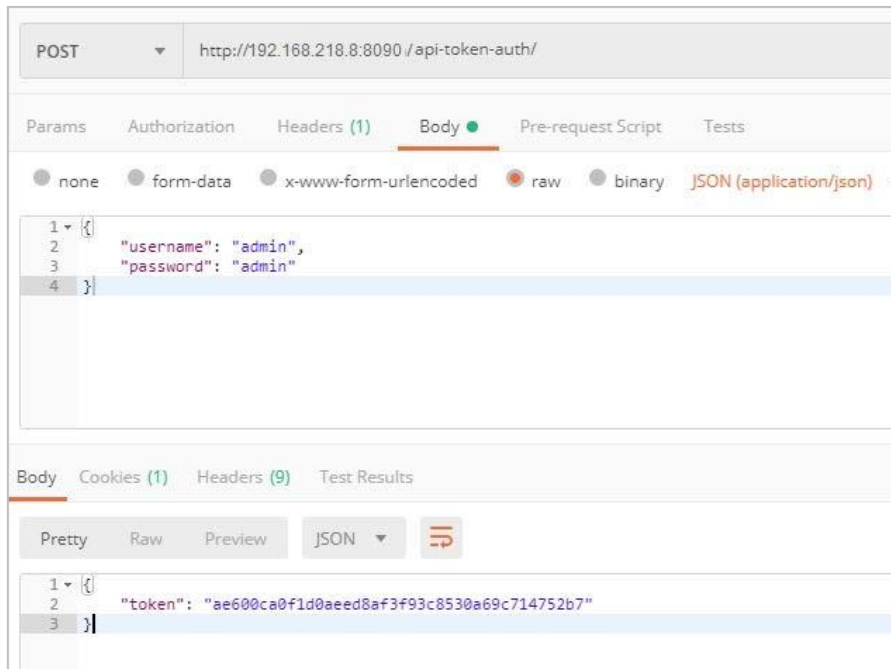
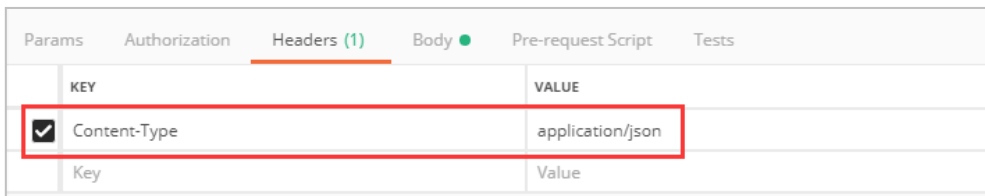
<http://serverIP:serverPort/api/docs/#api-token-auth>

**serverIP:** BioTime 8.5 server or computer IP, such as: 192.168.218.8

**serverPort:** The server port of BioTime 8.5, such as: 8090



2) Get token via third-party API development tool, such as Postman.



## 2. Get Staff AuthToken

### 2.1 Staff JWT authtoken

URL: <http://serverIP:serverPort/staff-jwt-api-token-auth/>

**serverIP:** BioTime 8.5 server or computer IP

**serverPort:** The server port of BioTime 8.5

The way to get token is the same as JWT token above.

### 2.2 GetstaffGeneralAuthToken

URL: <http://serverIP:serverPort/staff-api-token-auth/>

**serverIP:** BioTime 8.5 server or computer IP

**serverPort:** The server port of BioTime 8.5

The way to get token is the same as JWT token above.

## 3. Use AuthToken

### 3.1 Demo 1

Request URL	<a href="http://serverIP:serverPort/iclock/api/terminals/">http://serverIP:serverPort/iclock/api/terminals/</a>
Request Herders	<b>JWT Token</b> { "Content-Type":"application/json", "Authorization":"JWTey.....oQi98" }
	<b>General Token</b> { "Content-Type":"application/json", "Authorization":"Token ae600ca0f1d0aeed8af3f93c8530a69c714752b7" }

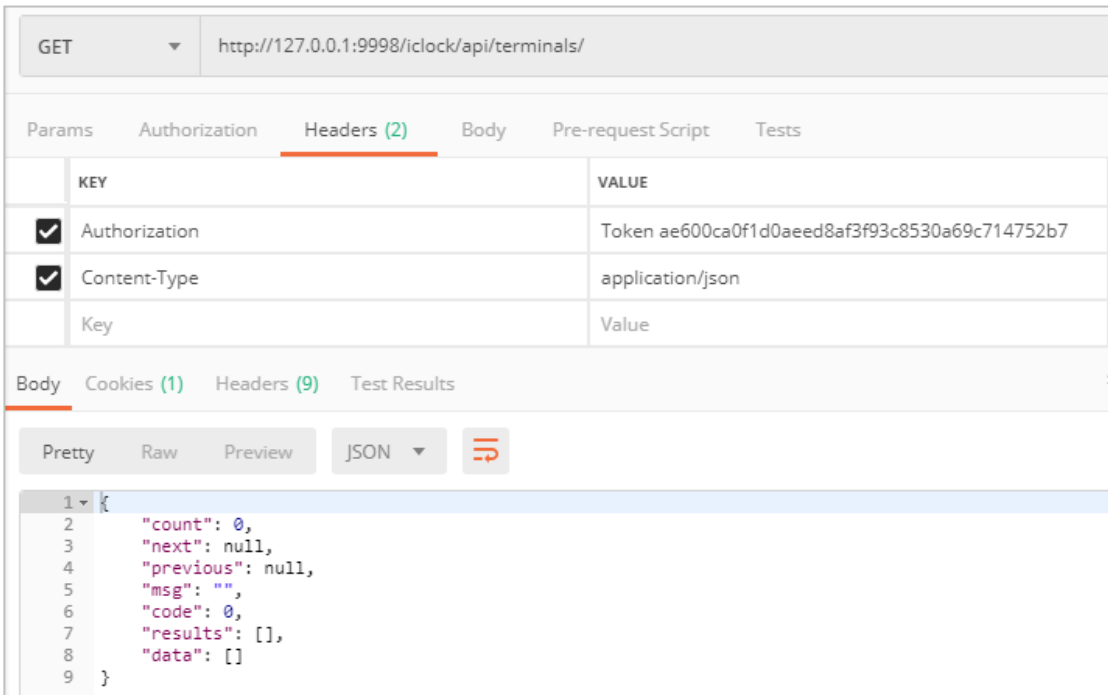
```

    {
      "count": 0,
      "next": null,
      "previous": null,
      "msg": "", "code":
0, "results": [],
      "data": []
    }
  
```

**Response Content**

### 3.2 Demo 2 (with Third Party Tool - Postman)

(1) Use General Token (same way to use JWT token)



## 4. Device API

### 4.1 Get Device List API

<b>HTTP Method</b>	GET
<b>URI</b>	/iclock/api/terminals/
<b>Data Type</b>	application/json

<b>Response Type</b>	JSON
<b>Request Address</b>	<p> <code>http://serverIP:serverPort/iclock/api/terminals/?sn=**&amp;page=**page_size=**&amp;alias=**&amp;area=**</code> </p> <p>           sn, page, page_siz, alias , area are optional filter field, use &amp; as connector         </p> <p>           While the request address without any filter field, you will get all devices list.         </p>
<b>Response JSON Format</b>	<p>           Example:         </p> <p>           Request Address:         </p> <p> <code>http://192.168.217.8:8090/iclock/api/terminals/?sn=ACEZ185060382</code> </p> <p>           Response:         </p> <pre> {   "count": 1,   "next": null,   "previous": null,   "msg": "", "code": 0,   "data": [     {       "id": 1,       "sn": "ACEZ185060382",       "ip_address": "127.0.0.1",       "alias": "ACEZ185060382_name",       "terminal_name": null,       "fw_ver": null,       "push_ver": "",       "state": 1,       "terminal_tz": 8,       "area": {         "id": 1,         "area_code": "1",         "area_name": "Not Authorized"       },     },   ], }           </pre>

```

        "last_activity": null,
        "user_count": null,
        "fp_count": null,
        "face_count": null,
        "palm_count": null,
        "transaction_count": null,
        "push_time": null,
        "transfer_time": "00:00;14:05",
        "transfer_interval": 10,
        "is_attendance": true,
        "area_name": "Not Authorized"
    }
]
}

```

#### 4.2 Get Device Object Info API

<b>HTTP Method</b>	GET
<b>URI</b>	/iclock/api/terminals/ <id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Address</b>	http://serverIP:serverPort/iclock/api/terminals/device id/
<b>Response JSON Format</b>	<p>Example:</p> <p>Request Address: http://192.168.218.8:8090/iclock/api/terminals/1/</p> <p>Response:</p> <pre> {     "id": 1,     "sn": "ACEZ185060382",     "ip_address": "127.0.0.1",     "alias": "ACEZ185060382_name", </pre>

```
"terminal_name": null,  
"fw_ver": null,  
"push_ver": "",  
"state": 1,  
"terminal_tz": 8,  
"area": {  
  "id": 1,  
  "area_code": "1",  
  "area_name": "NotAuthorized"  
},  
"last_activity": null,  
"user_count": null,  
"fp_count": null,  
"face_count": null,  
"palm_count": null,  
"transaction_count": null,  
"push_time": null,  
"transfer_time": "00:00;14:05",  
"transfer_interval": 10,  
"is_attendance": true,  
"area_name": "Not Authorized"  
}
```

## 5. Employee API

### 5.1 Get Employee List API

<b>HTTP Method</b>	GET
<b>URI</b>	/personnel/api/employees/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON

<p><b>Request Address</b></p>	<p>http://serverIP:serverPort/personnel/api/employee/?emp_code=**&amp;page=**&amp;first_name=**&amp;last_name=**&amp;department=**&amp;app_status=**</p> <p>page, limit, emp_code, first_name, last_name, department, app_status are optional filter fields.</p>
<p><b>Response JSON Format</b></p>	<p>Example:</p> <p>Request Address:</p> <p>http://192.168.218.8:8090/personnel/api/employee/?emp_code=employee1</p> <p>Response:</p> <pre>{   "count": 1,   "next": null,   "previous": null,   "msg": "", "code":   0,   "data": [     {       "id": 5,       "emp_code": "employee1",       "first_name": "emp1_first_name",       "last_name": "emp1_last_name",       "nickname": "",       "device_password": "",       "card_no": "",       "department": {         "id": 1,         "dept_code": "1",         "dept_name": "Department"       },       "dept_name": "Department",       "position": null,       "position_name": null,       "hire_date": "2019-04-02",</pre>

```
"gender": "",
"birthday": null,
"verify_mode": null,
"emp_type": null,
"contact_tel": "",
"office_tel": "",
"mobile": "",
"national": "",
"city": "",
"address": "",
"postcode": "",
"email": "",
"enroll_sn": "",
"ssn": "",
"religion": "", "enable_att":
false, "enable_overtime":
false, "enable_holiday":
false, "dev_privilege":
null, "self_password":
"pbkdf2_sha256$36000$XIJACI8JIXWA$a4hztrK8RSMjBgd9sWL3ITMQS3O9M
z+QwaGU/RBiXRU=",
"flow_role": [], "area":
[
  {
    "id": 1,
    "area_code": "1",
    "area_name": "Not Authorized"
  }
],
"area_name": "Not Authorized",
"app_status": 0,
```

```

        "app_role": null
    }
]
}

```

## 5.2 Get Employee ObjectInfo API

<b>HTTP Method</b>	GET
<b>URI</b>	/personnel/api/employees/ <id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Address</b>	http://serverIP:serverPort/personnel/api/employees/employee ID/
<b>Response JSON Format</b>	<p>Example:</p> <p>Request Address: http://192.168.218.8:8090/personnel/api/employees/6/</p> <p>Response:</p> <pre> {   "emp_code": "employee333",   "first_name": "emp3_first_name",   "last_name": "emp3_last_name",   "nickname": null,   "device_password": null,   "card_no": null,   "department": 1,   "position": null,   "hire_date": "2019-04-02",   "gender": null,   "birthday": null,   "verify_mode": -1,   "emp_type": null,   "contact_tel": null, </pre>

```

"office_tel": null,
"mobile": null,
"national": null,
"city": null,
"address": null,
"postcode": null,
"email": null,
"enroll_sn": null,
"ssn": null,
"religion": null,
"enable_att": true,
"enable_overtime": false,
"enable_holiday": true,
"dev_privilege": 1,
"self_password":
"pbkdf2_sha256$36000$XBVRNMOywdNI$P4W7MIZVa3Ho2VBdU2SewS/pb8
GavBYSGBXM/bgL+N0=",
"flow_role": [],
"area": [
    1
],
"app_status": 0,
"app_role": 1
}

```

### 5.3 Create Employee API

<b>HTTP Method</b>	POST
<b>URI</b>	/personnel/api/employees/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Parameter</b>	Reference: <a href="http://serverIP:serverPort/api/personnel_docs/#employees-create">http://serverIP:serverPort/api/personnel_docs/#employees-create</a>

**ResponseJSON  
Format****Request Address:**

http://192.168.218.8:8090/personnel/api/employees/

**Request Body:**

```
{  
  "emp_code": "employee333",  
  "first_name": "emp3_first_name",  
  "last_name": "emp3_last_name",  
  "area": [1],  
  "department": 1  
}
```

**Response Data:**

```
{  
  "id": 6,  
  "emp_code": "employee333",  
  "first_name": "emp3_first_name",  
  "last_name": "emp3_last_name",  
  "nickname": null,  
  "device_password": null,  
  "card_no": null,  
  "department": {  
    "id": 1,  
    "dept_code": "1",  
    "dept_name": "Department"  
  },  
  "dept_name": "Department",  
  "position": null,  
  "position_name": null,  
  "hire_date": "2019-04-02",  
  "gender": null,  
  "birthday": null,  
  "verify_mode": -1,  
}
```

```
"emp_type": null,  
"contact_tel": null,  
"office_tel": null,  
"mobile": null,  
"national": null,  
"city": null,  
"address": null,  
"postcode": null,  
"email": null,  
"enroll_sn": null,  
"ssn": null,  
"religion": null,  
"enable_att": true,  
"enable_overtime": false,  
"enable_holiday": true,  
"dev_privilege": 0,  
"self_password":  
"pbkdf2_sha256$36000$XBVRNMOywdNI$P4W7MIZVa3Ho2VBdU2SewS/pb8  
GavBYSGBXM/bgL+N0=",  
"flow_role": [],  
"area": [  
  {  
    "id": 1,  
    "area_code": "1",  
    "area_name": "Not Authorized"  
  }  
],  
"area_name": "Not Authorized",  
"app_status": 0,  
"app_role": 1  
}
```

## 5.4 Update Employee API

<b>HTTP Method</b>	PATCH
<b>URI</b>	/personnel/api/employees/ <id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Parameter</b>	Reference: <a href="http://serverIP:serverPort/api/personnel_docs/#employees-update">http://serverIP:serverPort/api/personnel_docs/#employees-update</a>
<b>Response JSON Format</b>	<p><b>Request Address:</b>  <a href="http://192.168.218.8:8090/personnel/api/employees/6/">http://192.168.218.8:8090/personnel/api/employees/6/</a></p> <p><b>Request Body:</b></p> <pre>{   "first_name": "emp3_first_name_update",   "last_name": "emp3_last_name_update", }</pre> <p><b>Response Data:</b></p> <pre>{   "id": 6,   "emp_code": "employee333", "first_name":   "emp3_first_name_update", "last_name":   "emp3_last_name_update", "nickname":   null,   "device_password": null,   "card_no": null,   "department": 1,   "position": null,   "hire_date": "2019-04-02",   "gender": null,   "birthday": null,   "verify_mode": -1,   "emp_type": null, }</pre>

```

"contact_tel": null,
"office_tel": null,
"mobile": null,
"national": null,
"city": null,
"address": null,
"postcode": null,
"email": null,
"enroll_sn": null,
"ssn": null,
"religion": null,
"enable_att": true,
"enable_overtime": false,
"enable_holiday": true,
"dev_privilege": 1,
"self_password":
"pbkdf2_sha256$36000$XBVRNMOywdNI$P4W7MIZVa3Ho2VBdU2SewS/pb8
GavBYSGBXM/bgL+N0=",
"flow_role": [],
"area": [
    1
],
"app_status": 0,
"app_role": 1
}
}

```

## 5.5 Delete Employee API

<b>HTTP Method</b>	DELETE
<b>URI</b>	/personnel/api/employees/<id>/
<b>Data Type</b>	application/json

<b>Response Type</b>	JSON
<b>Request Address</b>	http://127.0.0.1:81/personnel/api/employees/6/

## 6. Resign API

### 6.1 Get Resign Personnel List API

<b>Method</b>	GET
<b>URI</b>	/personnel/api/resigns/
<b>Headers</b>	Content-Type: application/json Authorization: "JWT ey.....oQi98"

Query Parameters	
<b>Parameter</b>	page
	page_size
	employee
	resign_type
	resign_date
<b>Response JSON Format</b>	<pre>{   "count": 5,   "next": null,   "previous": null,   "msg": "",   "code": 0,   "data": [     {       "id": 5,       "resign_date": "2020-06-04",       "resign_type": 1,       "disableatt": true,       "employee": {         "id": 3,         "emp_code": "11111122",         "first_name": "aaabb",         "last_name": ""       },       "first_name": "aaabb",       "last_name": ""     },     .....   ] }</pre>

## 6.2 Get Resign Personnel Request API

<b>Method</b>	GET
<b>URI</b>	/personnel/api/resigns/{id}/
<b>Headers</b>	Content-Type: application/json Authorization: "JWT ey.....oQi98"

<b>Path Parameters</b>	
<b>Parameter:</b> id <b>Description:</b> required	
<b>Url</b>	/personnel/api/resigns/5/
<b>Response JSON Format</b>	<pre>{   "id": 5,   "resign_date": "2020-06-04",   "resign_type": 1,   "disableatt": true,   "employee": {     "id": 3,     "emp_code": "11111122",     "first_name": "aaabb",     "last_name": ""   },   "first_name": "aaabb",   "last_name": "" }</pre>

## 6.3 Create Resign Personnel API

<b>Method</b>	POST
<b>Url</b>	/personnel/api/resigns/
<b>Headers</b>	Content-Type: application/json Authorization: "JWT ey.....oQi98"
<b>Request Body JSON Format</b>	<pre>{   "employee": 3,   "disableatt": true,   "resign_type": 1,   "resign_date": "2020-06-01",   "reason": "" }</pre>

Parameter	Required	Type	Description
resign_type	Y	Integer	
disableatt	Y	Bool	
disableatt	Y	String	format: yyyy-mm-dd
Employee	Y	Integer	
reason	N	String	

<b>Response JSON Format</b>	<pre> {   "id": 5,   "resign_date": "2020-06-01",   "resign_type": 1,   "disableatt": true,   "employee": {     "id": 3,     "emp_code": "11111122",     "first_name": "aaabb",     "last_name": ""   },   "first_name": "aaabb",   "last_name": "" } </pre>
-----------------------------	--

#### 6.4 Update Resign Personnel API

<b>Method</b>	PUT
<b>Url</b>	/personnel/api/resigns/{id}/
<b>Headers</b>	Content-Type: application/json Authorization: "JWT ey.....oQi98"
<b>Path Parameter</b>	<b>Parameter:</b> id <b>Description:</b> required
<b>Request Body JSON Format</b>	<pre> {   "resign_date": "2020-06-02" } </pre>

Parameter	Required	Type	Description
resign_type	N	Integer	
disableatt	N	Bool	
disableatt	N	String	format: yyyy-mm-dd
reason	N	String	

Url	
	/personnel/api/resigns/5/
Response JSON Format	<pre>{   "id": 5,   "resign_date": "2020-06-02",   "resign_type": 1,   "disableatt": true,   "employee": {     "id": 3,     "emp_code": "11111122",     "first_name": "aaabb",     "last_name": ""   },   "first_name": "aaabb",   "last_name": "" }</pre>

### 6.5 Delete Resign Personnel API

Method	DELETE
Url	/personnel/api/resigns/{id}/
Headers	Content-Type: application/json Authorization: "JWT ey.....oQi98"
Path Parameter	<b>Parameter:</b> id <b>Description:</b> required
Response	None

## 6.6 Reinstatement Resign Personnel API

<b>Method</b>	POST
<b>Url</b>	/personnel/api/resigns/reinstatement/
<b>Headers</b>	Content-Type: application/json Authorization: "JWT ey.....oQi98"
<b>Request Body JSON Format</b>	{ "resigns": [1] }

Parameter	Required	Type	Description
Resigns	Y	List	resign id list example: [1, 2, 3, ...]

## 7. Department API

### 7.1 Get Department List API

<b>HTTP Method</b>	GET
<b>URI</b>	/personnel/api/departments/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Address</b>	http://serverIP:serverPort/personnel/api/departments/?dept_code=**&page=**&dept_code=**&dept_name=**&parent_dept=** page, limit, dept_code, dept_name, parent_dept are optional filter fields.
<b>Request address</b>	http://192.168.218.8:8090/personnel/api/departments/?dept_code=1
<b>Response JSON Format</b>	{ "count": 1, "next": null, "previous": null, "msg": "", "code": 0, "data": [ { "id": 1, "dept_code": "1", "dept_name": "Department", "parent_dept": null, "parent_dept_name": null } ] }

## 7.2 Get Department Object Info API

<b>HTTP Method</b>	GET
<b>URI</b>	/personnel/api/departments/<id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Response JSON Format</b>	<p><b>Request Address:</b> http://192.168.218.8:8090/personnel/api/departments/1/</p> <p><b>Request Body:</b></p> <pre>{   "id": 1,   "dept_code": "1",   "dept_name": "Department",   "parent_dept": null,   "parent_dept_name": null }</pre>

## 7.3 Create Department API

<b>HTTP Method</b>	POST
<b>URI</b>	/personnel/api/departments/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Parameter</b>	Reference: <a href="http://serverIP:serverPort/api/personnel_docs/#departments-create">http://serverIP:serverPort/api/personnel_docs/#departments-create</a>
<b>Response JSON Format</b>	<p><b>Request Address</b> http://192.168.218.8:8090/personnel/api/departments/</p> <p><b>Request Body</b></p> <pre>{   "dept_code": "222",   "dept_name": "Department222",   "parent_dept": 1 }</pre>

	<b>Response Data</b> <pre>{   "id": 2,   "dept_code": "222",   "dept_name": "Department222",   "parent_dept": 1 }</pre>
--	--

## 7.4 Update Department API

<b>HTTP Method</b>	PATCH
<b>URI</b>	/personnel/api/departments/ <id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Parameter</b>	Reference: <a href="http://serverIP:serverPort/api/personnel_docs/#departments-update">http://serverIP:serverPort/api/personnel_docs/#departments-update</a>
<b>Response JSON Format</b>	<b>Request Address</b> <a href="http://192.168.218.8:8090/personnel/api/departments/2/">http://192.168.218.8:8090/personnel/api/departments/2/</a>  <b>Request Body</b> <pre>{   "dept_name": "Department222_update" }</pre> <b>Response Data</b> <pre>{   "id": 2,   "dept_code": "222",   "dept_name": "Department222_update",   "parent_dept": 1 }</pre>

## 7.5 Delete Department API

<b>HTTP Method</b>	DELETE
<b>URI</b>	/personnel/api/departments/<id>/

<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Response JSON Format</b>	<p><b>Request Address:</b> http://19.2168.218.8:8090/personnel/api/departments/2/</p> <p><b>Resquest Body:</b> {}</p>

## 8. Area API

### 8.1 Get Area ListAPI

<b>HTTP Method</b>	GET
<b>URI</b>	/personnel/api/areas/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Address</b>	<p>http://serverIP:serverPort//personnel/api/areas/?area_code=**&amp;page=**&amp;area_code=**&amp;area_name=**&amp;parent_area=**</p> <p>page, limit, area_code, area_name, parent_area are optional filter fields.</p>
<b>Response JSON Format</b>	<p><b>Request address:</b> http://192.168.218.8:8090/personnel/api/areas/?area_code=2/</p> <p><b>Response JSON format:</b></p> <pre>{   "id": 2,   "area_code": "2",   "area_name": "Primerero",   "parent_area": {     "id": 1,     "area_code": "1",     "area_name": "Not Authorized",     "parent_area": null   },   "parent_area_name": "Not Authorized" }</pre>

## 8.2 Get Area Object Info API

<b>HTTP Method</b>	GET
<b>URI</b>	/personnel/api/areas/<id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Response JSON Format</b>	<p><b>Request address:</b> http://192.168.218.8:8090/personnel/api/areas/2/</p> <p><b>Response JSON format:</b></p> <pre>{   "id": 2,   "area_code": "2",   "area_name": "Primero",   "parent_area": {     "id": 1,     "area_code": "1",     "area_name": "Not Authorized",     "parent_area": null   },   "parent_area_name": "Not Authorized" }</pre>

## 8.3 Create Area API

<b>HTTP Method</b>	POST
<b>URI</b>	/personnel/api/areas/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Parameter</b>	Reference: <a href="http://serverIP:serverPort/api/personnel_docs/#areas-create">http://serverIP:serverPort/api/personnel_docs/#areas-create</a>
<b>Response JSON Format</b>	<p><b>Request Address</b> http://192.168.218.8:8090/personnel/api/areas/</p> <p><b>Request Body</b></p> <pre>{   "area_code": "222",</pre>

	<pre> "area_name": "Department222", "parent_area": 1 }  <b>Response Data</b> { "id": 2, "area_code": "222", "area_name": "Department222", "parent_area": 1 } </pre>
--	---

### 8.4 Update Area API

<b>HTTP Method</b>	PATCH
<b>URI</b>	/personnel/api/areas/ <id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Parameter</b>	Reference: <a href="http://serverIP:serverPort/api/personnel_docs/#areas-update">http://serverIP:serverPort/api/personnel_docs/#areas-update</a>
<b>Response JSON Format</b>	<p><b>Request Address</b>  <a href="http://192.168.218.8:8090/personnel/api/areas/2/">http://192.168.218.8:8090/personnel/api/areas/2/</a></p> <p><b>Request Body</b>  <pre> { "area_name": "Area222_update" } </pre> </p> <p><b>Response Data</b>  <pre> { "id": 2, "area_code": "222", "area_name": "area222_update", "parent_area": 1 } } </pre> </p>

## 8.5 Delete Area API

<b>HTTP Method</b>	DELETE
<b>URI</b>	/personnel/api/areas/<id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Response JSON Format</b>	<p><b>Request Address:</b> http://19.2168.218.8:8090/personnel/api/areas/2/</p> <p><b>Request Body:</b> { }</p>

## 9. Position API

### 9.1 GetPosition List API

<b>HTTP Method</b>	GET
<b>URI</b>	/personnel/api/positions/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Address</b>	<p>http://serverIP:serverPort/personnel/api/positions/?position_code=**&amp;page=**&amp;position_code=**&amp;position_name=**&amp;parent_position=**</p> <p>page, limit, position_code, position_name, parent_position are optional filter fields.</p>
<b>Response JSON Format</b>	<p><b>Request address:</b> http://192.168.218.8:8090/personnel/api/positions/?position_code=1</p> <p><b>Response JSON format:</b> {     "count": 1,     "next": null,     "previous": null,     "msg": "", "code":     0,     "data": [</p>

```

    {
      "id": 1,
      "position_code": "1",
      "position_name": "Department",
      "parent_position": null,
      "parent_position_name": null
    }
  ]
}

```

### 9.2 Get Position Object Info API

<b>HTTP Method</b>	GET
<b>URI</b>	/personnel/api/positions/<id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Response JSON Format</b>	<p><b>Request Address:</b> http://192.168.218.8:8090/personnel/api/positions/1/</p> <p><b>Request Body:</b></p> <pre> {   "id": 1,   "position_code": "1",   "position_name": "Position",   "parent_position": null,   "parent_position_name": null } </pre>

### 9.3 Create Position API

<b>HTTP Method</b>	POST
<b>URI</b>	/personnel/api/positions/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Parameter</b>	Reference: <a href="http://serverIP:serverPort/api/personnel_docs/#positions-create">http://serverIP:serverPort/api/personnel_docs/#positions-create</a>

Response JSON Format	<p><b>Request Address</b> http://192.168.218.8:8090/personnel/api/positions/</p> <p><b>Request Body</b> {   "position_code": "222",   "position_name": "Position222",   "parent_position": 1 }</p> <p><b>Response Data</b> {   "id": 2,   "position_code": "222",   "position_name": "Position222",   "parent_position": 1 }</p>
----------------------	--

## 9.4 Update Position API

<b>HTTP Method</b>	PATCH
<b>URI</b>	/personnel/api/positions/ <id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Parameter</b>	Reference: <a href="http://serverIP:serverPort/api/personnel_docs/#positions-update">http://serverIP:serverPort/api/personnel_docs/#positions-update</a>
Response JSON Format	<p><b>Request Address</b> http://192.168.218.8:8090/personnel/api/positions/2/</p> <p><b>Request Body</b> {   "position_name": "Position222_update" }</p> <p><b>Response Data</b> {   "id": 2,   "position_code": "222",   "position_name": "Position222_update",   "parent_position": 1 }</p>

## 9.5 Delete Position API

<b>HTTP Method</b>	DELETE
<b>URI</b>	/personnel/api/positions/<id>/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Response JSON Format</b>	<b>Request Address:</b> http://19.2168.218.8:8090/personnel/api/positions/2/ <b>Request Body:</b> {}

## 10. Transaction API

### 10.1 GetTransaction List API

<b>HTTP Method</b>	GET
<b>URI</b>	/iclock/api/transactions/
<b>Data Type</b>	application/json
<b>Response Type</b>	JSON
<b>Request Address</b>	<p>http://serverIP:serverPort/iclock/api/transactions/?emp_code=**&amp;start_time=**&amp;end_time=**</p> <p>page , page_size, emp_code, terminal_sn, start_time, end_time are optional filter fields.</p>
<b>Response JSON Format</b>	<p><b>Request Address:</b>            http://192.168.218.8:8090/iclock/api/transactions/?emp_code=100001&amp;start_time=2019-03-01 00:00:00&amp;end_time=2019-04-1 00:00:00</p> <p><b>Response JSON format:</b></p> <pre> {   "count": 7,   "next": null,   "previous": null,   "msg": "", "code":   0,   "data": [     {       "id": 1,       "emp_code": "100001",       "punch_time": "2019-03-04 09:50:00",       "punch_state": "0",       "verify_type": 1,       "work_code": null,       "terminal_sn": "",       "terminal_alias": null,       "area_alias": null,       "longitude": null,       "latitude": null,       "gps_location": "",       "mobile": null,       "source": 0, </pre>

```
        "purpose": 1,  
        "crc": null,  
        "is_attendance": 1,  
        "reserved": null,  
        "upload_time": "2019-03-04 09:50:00",  
        "sync_status": 1,  
        "sync_time": null,  
        "is_mask": 1,  
        "temperature": "35.0",  
        "emp": null,  
        "terminal": null  
    },  
    ...  
    ...  
    ...  
    1
```

## 10.2 First & Last Punch Report API

<b>HTTP Method</b>	GET
<b>URL</b>	/att/api/firstLastReport/
<b>Headers</b>	
<b>Content-Type</b>	application/json
<b>Authorization</b>	"JWT ey.....oQi98"
<b>Query Parameters</b>	
<b>Parameter</b>	<b>Description</b>
<b>page</b>	Page number
<b>page_size</b>	Page size
<b>start_date</b>	Start date (YYYY-MM-DD)
<b>end_date</b>	End date (YYYY-MM-DD)
<b>employees</b>	Employee ID list
<b>departments</b>	Department ID list
<b>areas</b>	Area ID list
<b>groups</b>	Group ID list
<b>Response</b>	
	<pre>{   "count": 1,   "next": null,   "previous": null,   "msg": "Success",   "code": 0,   "data": [     {       "emp_code": "1",       "first_name": "it",       "last_name": null,       "nick_name": "",       "gender": "Male",       "dept_code": "27",       "dept_name": "HRM",       "position_code": null,       "company_code": "1",       "company_name": "Company",       "position_name": null,       "att_date": "2026-04-01",       "weekday": "Wednesday",       "first_punch": "08:00 AM",       "last_punch": "05:00 PM",       "total_time": "09:00"     }   ] }</pre>

### 10.3 First In Last Out Report API

<b>HTTP Method</b>	GET
<b>URL</b>	/att/api/firstInLastOutReport/
<b>Headers</b>	
<b>Content-Type</b>	application/json
<b>Authorization</b>	"JWT ey.....oQi98"
<b>Query Parameters</b>	
<b>Parameter</b>	<b>Description</b>
<b>page</b>	Page number
<b>page_size</b>	Page size
<b>start_date</b>	Start date (YYYY-MM-DD HH:MM:SS)
<b>end_date</b>	End date (YYYY-MM-DD HH:MM:SS)
<b>employees</b>	Employee ID list
<b>departments</b>	Department ID list
<b>areas</b>	Area ID list
<b>groups</b>	Group ID list
<b>Response</b>	
<pre>{   "count": 1,   "next": null,   "previous": null,   "msg": "Success",   "code": 0,   "data": [     {       "emp_code": "1",       "first_name": "it",       "last_name": null,       "nick_name": "",       "gender": "Male",       "dept_code": "27",       "dept_name": "HRM",       "position_code": null,       "company_code": "1",       "company_name": "Company",       "position_name": null,       "att_date": "2026-04-01",       "weekday": "Wednesday",       "check_in": "08:00 AM",       "check_out": "04:37 PM",       "total_time": "08:37"     }   ] }</pre>	

For any clarifications regarding the API User Manual, please contact us  
through e-mail at [zk\\_me@zkteco.com](mailto:zk_me@zkteco.com).

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