

ZKBio Time 9.0 API User Manual

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1. API Description

ZKBio Time 9.0 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.

2. Get System User Auth Token

2.1 Request Instruction

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

2.2 How to get Token

2.2.1 Get token via browser

input the following link in the browser:

URL: <http://SeverIP:ServerPort/api/docs/#api-token-auth>

ServerIP : ZKBioTime 9.0 server or customer IP, such as: 58.23.12.98;

ServerPort : The server port of ZKBioTime 9.0, such as: 8097;

The screenshot shows the ZKBio Time API DOCS web interface. The browser address bar shows the URL `58.23.12.98:8097/api/docs/#api-token-auth`. The page title is "ZKBio Time API DOCS". The main content area is titled "api-token-auth" and shows the "create" endpoint. A red box highlights the "Interact" button. Below the endpoint information, there is a table with parameters:

Parameter	Description
username required	Valid username for authentication
password required	Valid password for authentication

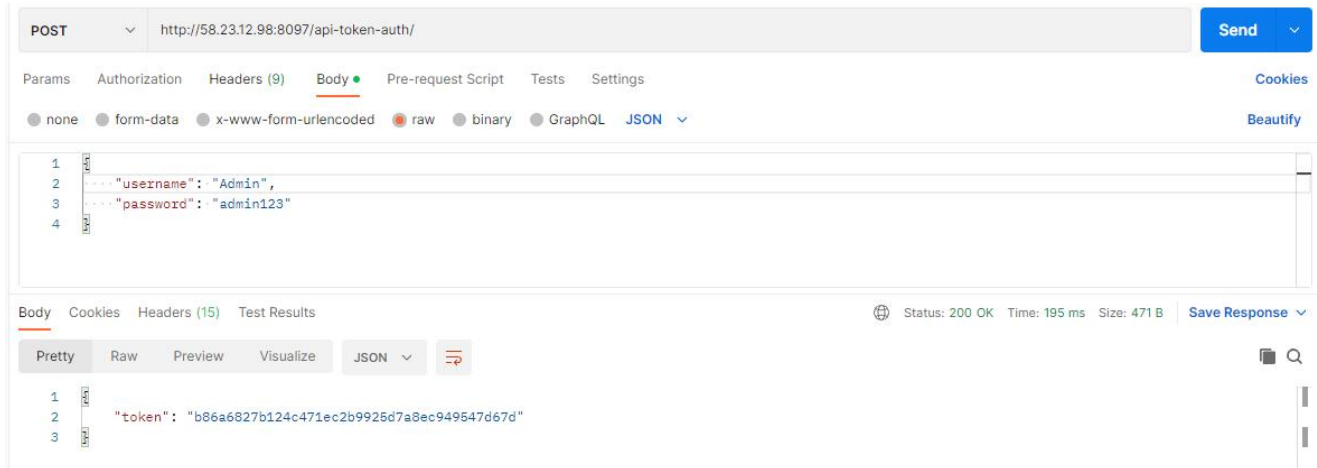
Below the table, there are input fields for "Username *" (containing "Admin") and "Password *" (containing "admin123"). To the right, there is a "Send Request" button and a "Close" button. The response area shows a JSON object:

```
{
  "token": "b86a6827b124c471ec2b9925d7a8ec949547d67d"
}
```

2.2.2 Get token via Postman

The screenshot shows the Postman interface for a POST request. The "Headers" tab is selected, showing a table with headers:

KEY	VALUE	DESCRIPTION	Bulk Edit	Presets
<input checked="" type="checkbox"/> Content-Type	application/json			
Key	Value	Description		



The screenshot shows a REST client interface. The request is a POST to `http://58.23.12.98:8097/api-token-auth/`. The body is a JSON object: `{ "username": "Admin", "password": "admin123" }`. The response is a JSON object: `{ "token": "b86a6827b124c471ec2b9925d7a8ec949547d67d" }`. The status is 200 OK, time is 195 ms, and size is 471 B.

2.2.3 Get token via Python

```
import json
import requests

url = "http://58.23.12.98:8097/personnel/api/areas/"
# use General token
headers = {
    "Content-Type": "application/json",
    "Authorization": "Token ae600.....2b7",
}

response = requests.get(url, headers=headers)
print(response.text)
```

3. Use Auth Token

3.1 Demo 1

Request URL	<code>http://serverIP:serverPort/iclock/api/terminals/</code>
Request Headers	<code>{</code>

	<pre>"Content-Type":"application/json", "Authorization":"Token b86a6827b124c471ec2b9925d7a8ec949547d67d" }</pre>
Content Type	<pre>{ "count": 0, "next": null, "previous": null, "msg": "", "code": 0, "results": [], "data": [] }</pre>

3.2 Demo 2(With Third Party Tool-Postman)

The screenshot shows a Postman interface for a GET request to `http://58.23.12.98:8097/iclock/api/terminals/`. The request headers are:

KEY	VALUE	DESCRIPTION
Content-Type	application/json	
Authorization	Token b86a6827b124c471ec2b9925d7a8ec949547d67d	

The response body is a JSON object:

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

4. Employee API

4.1 Get Employee List API

HTTP Method	GET
URI	/personnel/api/employees/
Data Type	application/json
Response Type	JSON
Request Address	<p>http://serverIP:serverPort/personnel/api/employees/?emp_code=**&page=**&first_name=**&last_name=**&department=**&app_status=**</p> <p>page, limit, emp_code, first_name, last_name, department, app_status are optional filter fields.</p>
Response JSON Body	<p>Example:</p> <p>Request Address:</p> <p>http://58.23.12.98:8097/personnel/api/employees/?emp_code=1</p> <pre>{ "count": 1, "next": null, "previous": null, "msg": "", "code": 0, "data": [{ "id": 1, "emp_code": "1", "first_name": "Harry", "last_name": "Potter", "nickname": "", "format_name": "1 Harry", "photo": "", "full_name": "Harry Potter", "device_password": null, "card_no": null, "department": { "id": 1, "dept_code": "1",</pre>

```
"dept_name": "Department",
},
"position": null,
"hire_date": "2018-06-26",
"gender": null,
"birthday": null,
"verify_mode": 0,
"emp_type": null,
"contact_tel": "",
"office_tel": null,
"mobile": "",
"national": "",
"city": "",
"address": "",
"postcode": "",
"email": "",
"enroll_sn": "",
"ssn": null,
"religion": "",
"attemployee": {
  "id": 1,
  "enable_attendance": true,
  "enable_overtime": true,
  "enable_holiday": true,
  "enable_schedule": true
},
"dev_privilege": 0,
"area": [
  {
    "id": 2,
    "area_code": "2",
    "area_name": "ZKTeco"
  }
],
"app_status": 0,
```



```

    "app_role": 1,
    "update_time": "2024-06-26 17:16:09",
    "fingerprint": "Ver 10:1",
    "face": "-",
    "palm": "-",
    "vl_face": "-",
    "vl_palm": "-",
    "vl_face_photo": "-",
    "CNIC": null,
    "Passport": null,
    "conge": null,
    "Primary Job": null,
    "NIN": null,
    "mohamed": null,
    "FP": null
  }
]
}

```

4.2 Get Employee Object Info API

HTTP Method	GET
URI	/personnel/api/employees/ <id>/
Data Type	application/json
Response Type	JSON
Request Address	http://serverIP:serverPort/personnel/api/employees/employee ID/
Response JSON Body	<p>Example:</p> <p>Request Address: http://58.23.12.98:8097/personnel/api/employees/4107/</p> <p>Response:</p> <pre> { "id": 4107, "emp_code": "303", </pre>

```
"first_name": "gucci",
"last_name": null,
"nickname": null,
"format_name": "303 gucci",
"photo": "",
"full_name": "gucci ",
"device_password": null,
"card_no": null,
"department": {
  "id": 1,
  "dept_code": "1",
  "dept_name": "Department"
},
"position": null,
"hire_date": "2024-06-26",
"gender": null,
"birthday": null,
"verify_mode": 0,
"emp_type": null,
"contact_tel": null,
"office_tel": null,
"mobile": null,
"national": null,
"city": null,
"address": null,
"postcode": null,
"email": null,
"enroll_sn": "CKJF201260077",
"ssn": null,
"religion": null,
"attemployee": {
  "id": 4107,
  "enable_attendance": true,
  "enable_overtime": true,
  "enable_holiday": true,
```

```
        "enable_schedule": true
    },
    "dev_privilege": 0,
    "area": [
        {
            "id": 2,
            "area_code": "2",
            "area_name": "ZKTeco"
        }
    ],
    "app_status": 0,
    "app_role": 1,
    "update_time": "2024-06-26 15:38:49",
    "fingerprint": "-",
    "face": "-",
    "palm": "Ver 12:1",
    "vl_face": "-",
    "vl_palm": "-",
    "vl_face_photo": "-",
    "CNIC": null,
    "Passport": null,
    "conge": null,
    "Primary Job": null,
    "NIN": null,
    "mohamed": null,
    "FP": null
}
```

4.3 Create Employee API

HTTP Method	POST
URL	/personnel/api/employees/
Data Type	application/json

Response Type	JSON
Request Parameter	Reference: http://serverIP:serverPort/api/personnel_docs/#employees-create
Request JSON Body	Example: Request Address: http://58.23.12.98:8097/personnel/api/employees/ { "emp_code": "employee333", "first_name": "emp3_first_name", "last_name": "emp3_last_name", "area": [1], "department": 1 }
Response JSON Body	{ "id": 4144, "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": "2024-06-26", "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": "",
"ssn": null,
"religion": null,
"dev_privilege": 0,
"self_password":
"pbkdf2_sha256$390000$0GfXrtbKMRik1vgpuPlcQr$5g3D3rwqtSSs
nLo6zEYXhMeknbX62GJUXF16IsA9xp0=",
"flow_role": [],
"area": [
    1
],
"app_status": 0,
"app_role": 1,
"CNIC": null,
"Passport": null,
"conge": null,
"Primary Job": null,
"NIN": null,
"mohamed": null,
"FP": null
}

```

4.4 Update Employee API

HTTP Method	PATCH
URL	/personnel/api/employees/ <id>/
Data Type	application/json
Response Type	JSON
Request Parameter	Reference: http://serverIP:serverPort/api/personnel_docs/#employees-update
Request JSON Body	Example: Request Address: http://58.23.12.98:8097/personnel/api/employees/4144/

	<pre>{ "first_name": "emp3_first_name_update", "last_name": "emp3_last_name_update", "card_no": 5659812 }</pre>
Response JSON Body	<pre>{ "emp_code": "employee333", "first_name": "emp3_first_name_update", "last_name": "emp3_last_name_update", "nickname": null, "device_password": null, "card_no": "5659812", "department": 1, "position": null, "hire_date": "2024-06-26", "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": "", "ssn": null, "religion": null, "dev_privilege": 0, "self_password": "pbkdf2_sha256\$390000\$0GfXrtbKMRik1vgpuPlcQr\$5g3D3rwqtSSs nLo6zEYXhMeknbX62GJUXF16IsA9xp0=", "flow_role": [], "area": [1], "app_status": 0, "app_role": 1, "CNIC": null, "Passport": null, "conge": null,</pre>

	<pre>"Primary Job": null, "NIN": null, "mohamed": null, "FP": null }</pre>
--	--

4.5 Delete Employee API

HTTP Method	DELETE
URL	/personnel/api/employees/<id>/
Data Type	application/json
Response Type	JSON
Request Address	http://58.23.12.98:8097/personnel/api/employees/4144/
Response JSON Body	<pre>{ }</pre>

5. Department API

5.1 Get Department List API

HTTP Method	GET
URL	/personnel/api/departments/
Data Type	application/json
Response Type	JSON
Request Address	<pre>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.</pre>
Response JSON Body	<pre>Example: Request address: http://58.23.12.98:8097/personnel/api/departments/?dept_code=1</pre>

```
{
  "count": 1,
  "next": null,
  "previous": null,
  "msg": "",
  "code": 0,
  "data": [
    {
      "id": 1,
      "dept_code": "1",
      "dept_name": "Department",
      "parent_dept": null
    }
  ]
}
```

5.2 Get Department Object Info API

HTTP Method	GET
URL	/personnel/api/departments/<id>/
Data Type	application/json
Response Type	JSON
Response JSON Body	Example: Request Address: http://58.23.12.98:8097/personnel/api/departments/1/ <pre>{ "id": 1, "dept_code": "1", "dept_name": "Department", "parent_dept": null }</pre>

5.3 Create Department API

HTTP Method	POST
--------------------	------

URL	/personnel/api/departments/
Data Type	application/json
Response Type	JSON
Request Parameter	Reference: http://serverIP:serverPort/api/personnel_docs/#departments-create
Request JSON Body	Request Address http://58.23.12.98:8097/personnel/api/departments/ { "dept_code": "222", "dept_name": "Department222", "parent_dept": 1 }
Response JSON Body	{ "id": 2, "dept_code": "222", "dept_name": "Department222", "parent_dept": 1 }

5.4 Update Department API

HTTP Method	PATCH
URL	/personnel/api/departments/ <id>/
Data Type	application/json
Response Type	JSON
Request Parameter	Reference: http://serverIP:serverPort/api/personnel_docs/#departments-update
Request JSON Body	Request Address http://58.23.12.98:8097/personnel/api/departments/2/ { "dept_name": "Department222_update"

	}
Response JSON Body	{ "id": 2, "dept_code": "222", "dept_name": "Department222_update", "parent_dept": 1 }

5.5 Delete Department API

HTTP Method	DELETE
URL	/personnel/api/departments/<id>/
Data Type	application/json
Response Type	JSON
Request Address	http://58.23.12.98:8097/personnel/api/departments/2/
Response JSON Body	{ }

6. Area API

6.1 Get Area List API

HTTP Method	GET
URL	/personnel/api/areas/
Data Type	application/json
Response Type	JSON
Request Address	http://serverIP:serverPort//personnel/api/areas/?area_code=*&page=**&area_code=**&area_name=**&parent_area=** page, limit, area_code, area_name, parent_area are optional filter fields.

Response JSON Body	<p>Example:</p> <p>Request address:</p> <p>http://58.23.12.98:8097/personnel/api/areas/?area_code=2</p> <pre>{ "id": 2, "area_code": "2", "area_name": "ZKTeco", "parent_area": { "id": 1, "area_code": " 1", "area_name": "Not Authorized", "parent_area": null }, "parent_area_name": "Not Authorized" }</pre>
---------------------------	--

6.2 Get Area Object Info API

HTTP Method	GET
URI	/personnel/api/areas/<id>/
Data Type	application/json
Response Type	JSON
Response JSON Body	<p>Request address:</p> <p>http://58.23.12.98:8097/personnel/api/areas/2/</p> <pre>{ "id": 2, "area_code": "2", "area_name": "ZKTeco", "parent_area": { "id": 1, "area_code": " 1", "area_name": "Not Authorized",</pre>

```

        "parent_area": null
    },
    "parent_area_name": "Not Authorized"
}

```

6.3 Create Area API

HTTP Method	POST
URL	/personnel/api/areas/
Data Type	application/json
Response Type	JSON
Request Parameter	Reference: http://serverIP:serverPort/api/personnel_docs/#areas-create
Request JSON Body	Request Address http://58.23.12.98:8097/personnel/api/areas/ { "area_code": "222", "area_name": "Area222", "parent_area": 1 }
Response JSON Body	{ "id": 2, "area_code": "222", "area_name": "Area222", "parent_area": 1 }

6.4 Update Area API

HTTP Method	POST
--------------------	------

URI	/personnel/api/areas/<id>/
Data Type	application/json
Response Type	JSON
Request Parameter	Reference: http://serverIP:serverPort/api/personnel_docs/#areas-create
Request JSON Body	Request Address http://58.23.12.98:8097/personnel/api/areas/2/ <pre>{ "area_name": "Area222_update" }</pre>
Response JSON Body	<pre>{ "id": 2, "area_code": "222", "area_name": "Area222_update", "parent_area": 1 }</pre>

6.5 Delete Area API

HTTP Method	DELETE
URI	/personnel/api/areas/<id>/
Data Type	application/json
Response Type	JSON
Request Address	http://58.23.12.98:8097/personnel/api/areas/2/
Response JSON Body	<pre>{ }</pre>

7. Position API

7.1 Get Position List API

HTTP Method	GET
URL	/personnel/api/positions/
Data Type	application/json
Response Type	JSON
Request Address	http://serverIP:serverPort/personnel/api/positions/?position_code=**&page=**&position_code=**&position_name=**&parent_position=** page, limit, position_code, position_name, parent_position are optional filter fields.
Response JSON Body	Request address: http://58.23.12.98:8097/personnel/api/areas/?position_code=1 <pre> { "count": 1, "next": null, "previous": null, "msg": "", "code": 0, "data": [{ "id": 1, "position_code": "1", "position_name": "Position", "parent_position": null, "parent_position_name": null }] } </pre>

7.2 Get Position Object Info API

HTTP Method	GET
URI	/personnel/api/positions/ <id>/
Data Type	application/json
Response Type	JSON
Request Address	http://58.23.12.98:8097/personnel/api/positions/1/
Response JSON Body	{

```
"id": 1,  
"position_code": "1",  
"position_name": "Position12",  
"parent_position": null,  
"parent_position_name": null  
}
```

7.3 Create Position API

HTTP Method	POST
URI	/personnel/api/positions/
Data Type	application/json
Response Type	JSON
Request Parameter	Reference: http://serverIP:serverPort/api/personnel_docs/#positions-create
Request Body	Request Address http://58.23.12.98:8097/personnel/api/positions/ { "position_code": "222", "position_name": "Position222", "parent_position": 1 }
Response JSON Body	{ "id": 2, "position_code": "222", "position_name": "Position222", "parent_position": 1 }

7.4 Update Position API

HTTP Method	PATCH
URI	/personnel/api/positions/ <id>/
Data Type	application/json
Response Type	JSON
Request Parameter	Reference: http://serverIP:serverPort/api/personnel_docs/#positions-update
Request JSON Body	Request Address http://58.23.12.98:8097/personnel/api/positions/2/ { "position_name": "Position222_update" }
Response JSON Body	{ "id": 2, "position_code": "222", "position_name": "Position222_update", "parent_position": 1 }

7.5 Delete Position API

HTTP Method	DELETE
URI	/personnel/api/positions/<id>/
Data Type	application/json
Response Type	JSON
Reuest Address	http://58.23.12.98:8097/personnel/api/positions/2/
Response JSON Body	{ }

8. Device API

8.1 Get Device List API

HTTP Method	GET
URL	/iclock/api/terminals/
Data Type	application/json
Response Type	JSON
Request Address	<p>http://serverIP:serverPort/iclock/api/terminals/?sn=**&page=**&limit=**&alias=**&area=**</p> <p>sn, page, limit, alias , area are optional filter field, use & as connector While the request address without any filter field, you will get all devices list.</p>
Response JSON Body	<p>Example:</p> <p>Request Address:</p> <p>http://58.23.12.98:8097/iclock/api/terminals/?sn=CKJF201260077</p> <pre>{ "count": 1, "next": null, "previous": null, "msg": "", "code": 0, "data": [{ "id": 1, "sn": "CKJF201260077", "ip_address": "10.8.12.241", "alias": "Auto add", "terminal_name": "SpeedFace-V5L[TD]", "fw_ver": "ZAM170-NF-1.8.12-OCM-355-01", "push_ver": "Ver 2.0.33S-20220623",</pre>

```
    "state": "4",
    "terminal_tz": 8,
    "area": {
      "id": 293,
      "area_code": "10087",
      "area_name": "ZKTeco"
    },
    "last_activity": "2024-06-26 15:36:22",
    "user_count": 100,
    "fp_count": 10,
    "face_count": 3,
    "palm_count": 5,
    "transaction_count": 15,
    "push_time": "2024-06-26 15:36:17",
    "transfer_time": "00:00;14:05",
    "transfer_interval": 1,
    "is_attendance": 1,
    "area_name": "ZKTeco"
  }
]
```

8.2 Get Device Object Info API

HTTP Method	GET
URL	/iclock/api/terminals/<id>/
Data Type	application/json
Response Type	JSON
Request Address	http://serverIP:serverPort/iclock/api/terminals/device id/
Response JSON Body	Example: Request Address: http://58.23.12.98:8097/iclock/api/terminals/1/

```
{
  "id": 1,
  "sn": "CKJF201260077",
  "ip_address": "10.8.12.241",
  "alias": "Auto add",
  "terminal_name": "SpeedFace-V5L[TD]",
  "fw_ver": "ZAM170-NF-1.8.12-OCM-355-01",
  "push_ver": "Ver 2.0.33S-20220623",
  "state": "1",
  "terminal_tz": 8,
  "area": {
    "id": 2,
    "area_code": "2",
    "area_name": "ZKTeco"
  },
  "last_activity": "2024-06-26 15:46:45",
  "user_count": 100,
  "fp_count": 10,
  "face_count": 3,
  "palm_count": 5,
  "transaction_count": 15,
  "push_time": "2024-06-26 15:36:17",
  "transfer_time": "00:00;14:05",
  "transfer_interval": 1,
  "is_attendance": 1,
  "area_name": "ZKTeco"
}
```

9. Transaction API

9.1 Get Transaction List API

HTTP Method	GET
URI	/iclock/api/transactions/
Data Type	application/json
Response Type	JSON
Request Address	<p>http://serverIP:serverPort/iclock/api/transactions/?emp_code=*&start_time=**&end_time=**</p> <p>page , limit, emp_code, terminal_sn, start_time, end_time are optional filter fields.</p>
Response JSON Body	<p>Request Address:</p> <p>http://58.23.12.98:8097/iclock/api/transactions/?emp_code=1&start_time=2019-03-01 00:00:00&end_time=2019-04-1 00:00:00</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, </pre>

```
"source": 0, "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, //null, 0, 1, 255(Mask checking closed)
"temperature": 36.4 //null, temperature,
255(Temperature checking closed)
"emp": null,
"terminal": null },
...
...
...
]
}
```