

# API Linkage Documentation (20250401)

## Access method

1. Communication protocol uses HTTP for communication.
2. The request method is POST by default, and the Content-Type of the POST request: application/json.
3. Character encoding: uniformly use UTF-8 encoding format.

## Common Parameters

Common parameters need to be placed in the HTTP Header request header, as shown in the following table:

Parameter Name	Type	Required	Description	Remark
Timestamp	Integer	Yes	The current timestamp, which records when the API request was made. For example, 20250104151726 , if the difference from the current time is too large, it will cause a signature expiration error.	yyyyMMddHHmmss eg. 20250104151726
Version	String	Yes	The version number defaults to 1.0.0, which is used for subsequent upgrades and extensions to distinguish and manipulate the version of the API.	2 digit for version no, do not cross check for hotfix.
Token	String	Yes	Security token key.	E(H+MbQeThWmZq4t7w!z\$C&F)J @NcRfUjXn2r5u8x/A?D*G-KaPdS gVkYp3s6v9y
Username	String	Yes		BATCHTECH

## The returned result is uniformly formatted

As long as the request is processed normally by either side, the HTTP status code of the response is 200. For example, the error code in the returned message body is that the signature failed, but the HTTP status code is 200, not 401.

Return result format: JSON string

Parameter name	Type	Required	Description	Remark
code	Integer	Yes	Defined status code	200: Operation succeeded 401: Signature authentication failed 500: System internal error 501: Interface not implemented
msg	String	Yes	Returned message content	Message content
data	String	No	Data objects, such as the data content returned by query data	To query data, different interfaces need to be parsed according to different data structures

### 1. The result is returned successfully

```
{"msg": "operation succeeded", "code": 200}
```

### 2. Failure returns result

```
{"msg": "(ORDER-294-PD-016) The latest delivery time cannot be less than [22/10/2022 10:22:31].", "code": 500}
```

## Data Sent from BCS to ERP

### 1. Start Production Order

#### API address

```
{address}/external/bcs/loadOrder/start
```

ERP API address

## Request parameters

Parameter Name	Type	Required	Description	Remark
loadOrder Code	String	Yes	Production Order Code	Production Order Code of production begins
loadingStartTime	Integer	Yes	Timestamp of Production Start	yyyyMMddHHmmss eg. 20250104151726
plantCode	Integer	Yes	Plant Code	
lineCode	Integer	Yes	Line Code	e.g. plant 1 is 1, plant 2 is 2

## 2. Completed Production Order

### API address

{address}/external/bcs/loadOrder/complete

ERP API address

### Request parameters

Parameter Name	Type	Required	Description	remark
loadOrder Code	String	Yes	Production Order Code	Production Order Code of completed production
loadingEndTime	Integer	Yes	Timestamp of Production End	yyyyMMddHHmmss eg. 20250104151726
doNo	String	Yes	Delivery Order Number	
returnQty	Decimal	Yes	Return Qty	
actualQty	Decimal	Yes	Actual Batched Qty	

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plantCode	Integer	Yes	Plant Code	
lineCode	Integer	Yes	Line Code	e.g. plant 1 is 1, plant 2 is 2

### 3. Completed Production Order Material Usage

#### API address

{address}/external/bcs/loadOrder/materialUsage

ERP API address

#### Request parameters

Parameter Name	Type	Required	Description	remark
loadOrderCode	String	Yes	Production Order Code	Production Order Code of completed production
plantCode	String	Yes	Plant Code	
doNo	String	Yes	Delivery Order Number	
batchId	String	Yes	Batch Number	
dateTime	Integer	Yes	Timestamp of Batch	yyyyMMddHHmmss eg. 20250104151726
materialCode	String	Yes	Material Code	
materialName	String	Yes	Material Name	

target	Decimal	Yes	Target weight/volume	
actual	Decimal	Yes	Actual weight/volume	
uom	String	Yes	Unit of Measurement for actual and target	
manualAdjustment	Decimal	Yes	Manual Top up Qty	
manualAbort	Int	Yes	0 = No 1 = Yes	
lineCode	Integer	Yes	Line Code	e.g. plant 1 is 1, plant 2 is 2

#### 4. Monthly Material Usage (Respond for GET)

##### Request parameters

Parameter Name	Type	Required	Description	remark
plantCode	String	Yes	Plant Code	
materialCode	String	Yes	Material Code	
materialName	String	Yes	Material Name	
target	Decimal	Yes	Target weight/volume	Sum of whole month
actual	Decimal	Yes	Actual weight/volume	Sum of whole month

	al			
uom	String	Yes	Unit of Measurement for actual and target	
manualAdjustment	Decimal	Yes	Manual Top up Qty	Sum of whole month
lineCode	Integer	Yes	Line Code	e.g. plant 1 is 1, plant 2 is 2

## 5. Cancellation of Production Order

### API address

{address}/external/bcs/loadOrder/cancelled

ERP API address

### Request parameters

Parameter Name	Type	Required	Description	Remark
loadOrderCode	String	Yes	Production Order Code	Production Order Code to cancel
cancelledTime	Integer	Yes	Cancellation timestamp	yyyyMMddHHmmss eg. 20250104151726
plantCode	Integer	Yes	Plant Code	
lineCode	Integer	Yes	Line Code	e.g. plant 1 is 1, plant 2 is 2

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