

# Atomic Increment Operator

Mobile Backend Services supports the Mongo `$inc` atomic increment operator.

## `$inc`

You can use `$inc` to increment (or decrement) a [custom field](#) by a specified value in a single update operation.

- The operator accepts positive and negative increment amounts
- It can only be applied to a single field per method call.

`$inc` is specified with the following form, where `fieldName` is the name of the field to update and `value` is a positive (or negative) number to increment (or decrement) `fieldName` by:

```
"fieldName": { "$inc:" value}
```

The operator must be enclosed quotes, as shown above. The following methods support the `$inc` operator:

- [Checkins.update](#)
- [CustomObjects.update](#)
- [Events.update](#)
- [Files.update](#)
- [PhotoCollections.update](#)
- [Photos.update](#)
- [Places.update](#)
- [Posts.update](#)
- [Reviews.update](#)
- [Users.update](#)
- [Statuses.update](#)

## Examples

The following example increments the `score` custom field by 10 in a [CustomObjects](#) update to a custom object called `family`:

> Expand

```
$ curl -b c.txt -c c.txt -X PUT -F "id=511117915554f74313000009" -F
"fields={"favorite":"play xbox 360",
"pet":"shark" ,"score":{"$inc":10}}"
"https://api.cloud.appcelerator.com/v1/objects/family/update.json?key=TENIhpXtjFbkBbztvfZMwn
ciOjE9aHjd"
{
  "meta": {
    "code": 200,
    "status": "ok",
    "method_name": "updateCustomObject"
  },
  "response": {
    "family": [
      {
        "family_name": "ACS",
        "score": 10,
        "age": 40,
        "cars": 1,
        "favorite": "play xbox 360",
        "pet": "shark",
        "id": "511117915554f74313000009",
        "created_at": "2013-02-05T14:30:41+0000",
        "updated_at": "2013-02-05T14:30:41+0000",
        "user": {
          "id": "511117905554f74313000003",
          "first_name": "Alice",
          "last_name": "Gal",
          "created_at": "2013-02-05T14:30:40+0000",
          "updated_at": "2013-02-05T14:30:41+0000",
          "external_accounts": [

        ],
        "confirmed_at": "2013-02-05T14:30:40+0000",
        "username": "alice",
        "email": "alice@gal.com",
        "admin": "false"
      }
    ]
  }
}
```

source

The following example decrements the `score` custom field by 20 in a `Checkins` update:

> Expand

```
$ curl -b c.txt -c c.txt -X PUT -F "checkin_id=511111945554f742d300000b" -F
"custom_fields={"favorite":"play xbox 360", "pet":"shark" ,"score":{"$inc":-20}}"
"https://api.cloud.appcelerator.com/v1/checkins/update.json?key=TENIhpXtjFbkBbztvfZMwn
ciOjE9aHjd"
{
  "meta": {
    "code": 200,
```

source

```
"status": "ok",
"method_name": "updateCheckin"
},
"response": {
  "checkins": [
    {
      "id": "511111945554f742d300000b",
      "created_at": "2013-02-05T14:05:08+0000",
      "updated_at": "2013-02-05T14:05:08+0000",
      "place": {
        "id": "511111935554f742d3000009",
        "name": "Maya Restaurant",
        "created_at": "2013-02-05T14:05:07+0000",
        "updated_at": "2013-02-05T14:05:07+0000",
        "address": "303 2nd Street",
        "city": "San Francisco",
        "state": "CA",
        "country": "United States",
        "phone_number": "(415) 543-2928",
        "latitude": 37.784732,
        "longitude": -122.395441,
        "google_cid": "7106049823222705125",
        "user": {
          "id": "511111925554f742d3000003",
          "first_name": "Alice",
          "last_name": "Gal",
          "created_at": "2013-02-05T14:05:06+0000",
          "updated_at": "2013-02-05T14:05:08+0000",
          "external_accounts": [

            ],
          "confirmed_at": "2013-02-05T14:05:06+0000",
          "username": "alice",
          "email": "alice@gal.com",
          "admin": "false"
        }
      },
    },
    "user": {
      "id": "511111925554f742d3000003",
      "first_name": "Alice",
      "last_name": "Gal",
      "created_at": "2013-02-05T14:05:06+0000",
      "updated_at": "2013-02-05T14:05:08+0000",
      "external_accounts": [

        ],
      "confirmed_at": "2013-02-05T14:05:06+0000",
      "username": "alice",
      "email": "alice@gal.com",
      "admin": "false"
    },
    "custom_fields": {
      "family_name": "ACS",
      "score": 15,
      "age": 40,
      "cars": 1,
      "favorite": "play xbox 360",
      "pet": "shark"
    }
  }
}
```



```
    ]  
  }  
}
```

If you apply \$inc to multiple fields in one Update call, you will get an error:

```
$ curl -b c.txt -c c.txt -X PUT -F "checkin_id=511111945554f742d300000b" -F  
"custom_fields={"favorite":"play xbox 360", "pet":"shark" ,"score":{$inc:10},  
"age":{$inc:10}}"  
"http://api.cloud.appcelerator.com/v1/checkins/update.json?key=HSejkGE9ghavAe1MJv7bZYN  
M5HyMhqYq"  
{  
  "meta": {  
    "status": "fail",  
    "code": 400,  
    "message": "$inc operation only support to increase one field once.",  
    "method_name": "updateCheckin"  
  }  
}
```