

Grain Accounting Data Models

Below are a few basic examples of the JSON structures Barchart processes for client display.

- Customer
- Contracts
- Scale Tickets
- Commodity Balances

These entities are normally delivered via an HTTP POST to a Barchart hosted endpoint. Note the below are just examples - we can conform to any structure (as long as it's JSON).

Customer (used as a reference)

```
{
  "id": "1308",
  "name": "Elvis Presley",
  "phoneNumbers": [
    "+13124025555",
    "+14031225555"
  ],
  "emailAddresses": [
    "elvis@presley.com",
    "presley@elvis.com"
  ]
}
```

Contracts

```
{
  "id": "00004861",
  "contractNumber": "00004861",
  "commodityId": "C",
  "customerId": "1308",
  "locationId": "01",
  "completed": true,
  "type": "Basis",
  "createdAt": "2020-05-20T00:00:00-05:00",
  "deliveryStart": "2020-05-06T00:00:00-05:00",
  "deliveryEnd": "2020-07-31T00:00:00-05:00",
  "futuresMonth": "05/20",
  "priceBasis": -0.33,
  "price": 0,
  "amountBushels": 80000,
  "amountPounds": 0,
  "amountDelivered": 80000,
  "amountRemaining": 0
}
```

Scale Tickets

```
{
  "id": "L0560999 200625",
  "ticketNumber": "L0560999",
  "commodityId": "C",
  "customerId": "1308",
  "locationId": "01",
  "createdAt": "2020-07-04T14:33:00-5:00",
  "grossWeight": "90120.000000",
  "tareWeight": "25840.000000",
  "netWeight": "64280.000000",
  "netUnits": "1147.860000",
  "moisture": "13.7"
}
```

Commodity Balances

```
{
  "customerId": "1308",
  "commodityId": "C",
  "balance": 80000,
  "uom": "Bushels",
  "updatedAt": "2020-07-23T14:39:17-05:00"
}
```

Reference Data

Optional reference data to help resolve ID's to meaningful values.

Commodities

```
{
  "id": "C",
  "name": "Corn"
  ...
}
```

Locations

```
{
  "id": "01",
  "name": "Main Elevator"
  ...
}
```

Example Update

An HTTP POST with an authentication header (normally `x-api-key`) and a JSON body:

```
[
  {
    "updateType": "scale_ticket",
    "update": {
      "id": "L0560999 200625",
      "ticketNumber": "L0560999",
      "commodityId": "C",
      "customerId": "1308",
      "locationId": "01Main",
      "createdAt": "2020-07-04T14:33:00-5:00",
      "grossWeight": "90120.000000",
      ...
    }
  },
  {
    "updateType": "contract",
    "update": {
      "id": "00004861 202023",
      "contractNumber": "00004861",
      "commodityId": "C",
      "customerId": "1308",
      "locationId": "01",
      "completed": true,
      "type": "Basis",
      "createdAt": "2020-05-20T00:00:00-05:00",
      "deliveryStart": "2020-05-06T00:00:00-05:00",
      "deliveryEnd": "2020-07-31T00:00:00-05:00",
      "futuresMonth": "05/20",
      ...
    }
  },
  {
    "updateType": "balance",
    "update": {
      "customerId": "1308",
      "commodityId": "C",
      "balance": 80000,
      "uom": "Bushels",
      "updatedAt": "2020-07-23T14:39:17-05:00"
    }
  },
  {
    "updateType": "customer",
    "update": { ... }
  }
]
```