Accessing Data Grid via JET

Introduction

Data Grid is an API that provides access to grids of data from the Eikon’s data
cloud and realtime systems. Data Grid is a data-item style API, which means the
caller provides a list of information to retrieve along with RICs (instrument
codes) to retrieve it for.

Data Grid Content

All data retrieved through the Data Grid API will be checked against the end users’
permissions. You should always be aware when using any Thomson Reuters data in
your application that data permissions will vary from user to user and not all
users of your application will have access to every point in Data Grid.

Here is a short summary of the content sets covered by Data Grid:

- Real time
- Reference & Identifiers
- Issuer Level Credit Rating

- Price & Volume
- Reuters Fundamentals
- Period End Ratios
- Time Series Ratios
- I/B/E/S Estimates
- StarMine Models & Analytics
- Corporate Actions
- Mergers and Acquisitions
- Events (REV)
- Mutual Fund Holdings
- Equity Index Information
- Economic Indicators
- Lipper Funds
- Government/Corporate Bond
- US Municipal Bond
- Mortgage Backed Securities
- CMO/ABS Tranche
- Single Name CDS
- Index CDS
- Commodities Physical Assets
- Warrants
- Ownership
- Portfolio
- Japan Fundamentals
- Activism and Defense
- Environmental, Social, and Governance

More information, as well as detailed descriptions of all fields, can be

found

by accessing the **Data Item Browser** in Eikon by pasting `cpurl://apps.cp./Apps/DataItemBrowser` into the Eikon toolbar. This tool is also

available via the Microsoft Excel Eikon add-on (installed with Eikon) as **Formula Builder**.

JET Data API

JET.Data(*servicename*)

JET.Data exposes many Eikon services, including Data Grid.

Argument

Type	Description
String	The name of a service. For Data Grid, use *datagrid*.

Return

Type	Description
Promise	Promise will either resolve and pass a service object, or will reject and pass an error if service is unavailable.

Example Usage

```
JET.Data("serviceName")
  .then(function(serviceObj){
```

```
    serviceObj.request(requestJSON)
    .then(function(result){
      handleResult(result);
    },
    function(err){
      console.log("request failed");
    }
  )},
  function(err){
    console.log("service access failed!");
  });
```

JET DataGrid Requests

General sample code

```
var request = {
  "instruments": [ "IBM", "GOOGL.O", "MSFT.O" ],
  "fields": [
    {
      "name": "TR.PriceClose"
    },
    {
      "name": "TR.Volume"
    },
    {
      "name": "TR.PriceLow"
```

```
    }
  ]
};

JET.Data("datagrid").then(function (service) {
  service.request(request).then(function (result) {
    console.log(result);
  }, function (err) { console.log(err); });
});
```

Examples

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Example 1: Instruments, fields, default parameters

Request

```
{
  "instruments": [ "IBM", "GOOGL.O", "MSFT.O" ],
```

```
  "fields": [
    {
      "name": "TR.PriceClose"
    },
    {
      "name": "TR.Volume"
    },
    {
      "name": "TR.PriceLow"
    }
  ]
}
```

Response

```
{
  "totalRowsCount": 4,
  "totalColumnsCount": 4,
  "columnHeadersCount": 1,
  "rowHeadersCount": 1,
  "headerOrientation": "horizontal",
  "headers": [
    [
      {"displayName": "Instrument"},
      {"displayName": "Price Close",
        "field": "TR.PRICECLOSE"},
      {"displayName": "Volume",
        "field": "TR.VOLUME"},
```

```
      {"displayName": "Price Low",
        "field": "TR.PRICELOW"}
    ]
  ],
  "data": [
    [
      "IBM",
      152.51,
      2663419.0,
      151.54
    ],
    [
      "GOOGL.O",
      748.46,
      1039847.0,
      744.34
    ],
    [
      "MSFT.O",
      52.85,
      25324828.0,
      52.44
    ]
  ]
}
```


HTML Table

Instrument	Price Close	Volume	Price Low
IBM	152.51	2663419	151.54
GOOGL.O	748.46	1039847	744.34
MSFT.O	52.85	25324828	52.44

Example 2: Sorting

Request

```
{
  "instruments": [ "IBM", "GOOGL.O", "MSFT.O" ],
  "fields": [
    {
      "name": "TR.PriceClose"
    },
    {
      "name": "TR.Volume"
    },
    {
      "name": "TR.PriceLow",
      "sort": "asc"
    }
  ]
}
```

Response

```
{
  "totalRowsCount": 4,
  "totalColumnsCount": 4,
  "columnHeadersCount": 1,
  "rowHeadersCount": 1,
  "headerOrientation": "horizontal",
  "headers": [
    [{
      "displayName": "Instrument"
    }, {
      "displayName": "Price Close",
      "field": "TR.PRICECLOSE"
    }, {
      "displayName": "Volume",
      "field": "TR.VOLUME"
    }, {
      "displayName": "Price Low",
      "field": "TR.PRICELOW"
    }]
  ],
  "data": [
    [
      "MSFT.O",
      52.85,
      25324828.0,
      52.44
    ],
```

```
    [
      "IBM",
      152.51,
      2663419.0,
      151.54
    ],
    [
      "GOOGL.O",
      748.46,
      1039847.0,
      744.34
    ]
  ]
}
```


HTML Table

Instrument	Price Close	Volume	Price Low
MSFT.O	52.85	25324828	52.44
IBM	152.51	2663419	151.54
GOOGL.O	748.46	1039847	744.34

Example 3: Field columns

Request


```
{
```

```
  "instruments": ["IBM", "GOOGL.O", "MSFT.O"],
  "fields": [{
    "name": "TR.PriceClose.date"
  }, {
    "name": "TR.Volume"
  }, {
    "name": "TR.PriceLow.currency"
  }]
}
```

Response

```
{
  "totalRowsCount": 4,
  "totalColumnsCount": 4,
  "columnHeadersCount": 1,
  "rowHeadersCount": 1,
  "headerOrientation": "horizontal",
  "headers": [
    [{
      "displayName": "Instrument"
    }, {
      "displayName": "Date",
      "field": "TR.PRICECLOSE.DATE"
    }, {
      "displayName": "Volume",
      "field": "TR.VOLUME"
    }, {
```

```
      "displayName": "Currency",
      "field": "TR.PRICELOW.currency"
    }]
  ],
  "data": [
    [
      "IBM",
      "2016-06-01T00:00:00Z",
      2663419.0,
      "USD"
    ],
    [
      "GOOGL.O",
      "2016-06-01T00:00:00Z",
      1039847.0,
      "USD"
    ],
    [
      "MSFT.O",
      "2016-06-01T00:00:00Z",
      25324828.0,
      "USD"
    ]
  ]
}
```


HTML Table

Instrument	Date	Volume	Currency
IBM	2016-06-01T00:00:00Z	2663419	USD
GOOGL.O	2016-06-01T00:00:00Z	1039847	USD
MSFT.O	2016-06-01T00:00:00Z	25324828	USD

Example 4: Field local parameters

Request

```
{
  "instruments": ["IBM", "GOOGL.O", "MSFT.O"],
  "fields": [{
    "name": "TR.PriceClose",
    "parameters": {
      "Scale": "3",
      "Lag": "1D"
    }
  }, {
    "name": "TR.Volume"
  }, {
    "name": "TR.PriceLow"
  }]
}
```

Response

```
{
```

```
  "totalRowsCount": 4,
  "totalColumnsCount": 4,
  "columnHeadersCount": 1,
  "rowHeadersCount": 1,
  "headerOrientation": "horizontal",
  "headers": [
    [{
      "displayName": "Instrument"
    }, {
      "displayName": "Price Close",
      "field": "TR.PRICECLOSE(Scale=3,Lag=1D)"
    }, {
      "displayName": "Volume",
      "field": "TR.VOLUME"
    }, {
      "displayName": "Price Low",
      "field": "TR.PRICELOW"
    }]
  ],
  "data": [
    [
      "IBM",
      0.15251,
      2663419.0,
      151.54
    ],
    [
      "GOOGL.O",
```

```
      0.74846,
      1039847.0,
      744.34
    ],
    [
      "MSFT.O",
      0.05285,
      25324828.0,
      52.44
    ]
  ]
}
```

HTML Table

Instrument	Price Close	Volume	Price Low
IBM	0.15251	2663419	151.54
GOOGL.O	0.74846	1039847	744.34
MSFT.O	0.05285	25324828	52.44

Example 5: Field global parameters

Request

```
{
  "instruments": ["IBM", "GOOGL.O", "MSFT.O"],
  "fields": [{
```

```
    "name": "TR.PriceClose"
  }, {
    "name": "TR.Volume"
  }, {
    "name": "TR.PriceLow"
  }],
  "parameters": {
    "SDate": "0CY",
    "Scale": "6"
  }
}
```

Response

```
{
  "totalRowsCount": 4,
  "totalColumnsCount": 4,
  "columnHeadersCount": 1,
  "rowHeadersCount": 1,
  "headerOrientation": "horizontal",
  "headers": [
    [{
      "displayName": "Instrument"
    }, {
      "displayName": "Price Close",
      "field": "TR.PRICECLOSE"
    }, {
      "displayName": "Volume",
```

```
      "field": "TR.VOLUME"
    }, {
      "displayName": "Price Low",
      "field": "TR.PRICELOW"
    }]
  ],
  "data": [
    [
      "IBM",
      0.00013762,
      3.462077,
      0.00013757
    ],
    [
      "GOOGL.O",
      0.00077801,
      1.637561,
      0.00077732
    ],
    [
      "MSFT.O",
      0.00005548,
      27.334061,
      0.00005542
    ]
  ]
}
```

HTML Table

Instrument	Price Close	Volume	Price Low
IBM	0.00013762	3.462077	0.00013757
GOOGL.O	0.00077801	1.637561	0.00077732
MSFT.O	0.00005548	27.334061	0.00005542

Example 6: Streaming and snapshot data

Request

```
{
  "instruments": ["IBM", "GOOGL.O", "MSFT.O"],
  "fields": [{
    "name": "CF_ASK"
  }, {
    "name": "TR.PriceLow"
  }],
  "include": {
    "streamingParameters": true
  }
}
```

Response

```
{
```

```
  "totalRowsCount": 4,
  "totalColumnsCount": 3,
  "columnHeadersCount": 1,
  "rowHeadersCount": 1,
  "headerOrientation": "horizontal",
  "headers": [
    [{
      "displayName": "Instrument"
    }, {
      "displayName": "CF_ASK",
      "field": "CF_ASK"
    }, {
      "displayName": "Price Low",
      "field": "TR.PRICELOW"
    }]
  ],
  "data": [
    [
      "IBM", {
        "type": "streamable",
        "instrument": "IBM",
        "field": "CF_ASK",
        "value": 153.23
      },
      151.54
    ],
    [
      "GOOGL.O", {
```

```
        "type": "streamable",
        "instrument": "GOOGL.O",
        "field": "CF_ASK",
        "value": 740.13
      },
      744.34
    ],
    [
      "MSFT.O", {
        "type": "streamable",
        "instrument": "MSFT.O",
        "field": "CF_ASK",
        "value": 54.24
      },
      52.44
    ]
  ]
}
```


HTML Table

Instrument	CF_ASK	Price Low
IBM	153.23 (CF_ASK	IBM)
GOOGL.O	740.13 (CF_ASK	GOOGL.O)
MSFT.O	54.24 (CF_ASK	MSFT.O)

Example 7: Non market data bonds

Request

```
{
  "instruments": ["38143A6D2=", "US027988555=", "00915SBG6=
"],
  "fields": [{
    "name": "TR.IW.WatchSourceDescription"
  }, {
    "name": "TR.IR.RatingRank"
  }, {
    "name": "TR.IO.OutlookDescription"
  }]
}
```

Response

```
{
  "totalRowsCount": 4,
  "totalColumnsCount": 4,
  "columnHeadersCount": 1,
  "rowHeadersCount": 1,
  "headerOrientation": "horizontal",
  "headers": [
    [{
      "displayName": "Instrument"
    }, {
```

```
      "displayName": "Rating Source Description",
      "field": "TR.IW.WATCHSOURCEDESCRIPTION"
    }, {
      "displayName": "Rating Rank",
      "field": "TR.IR.RATINGRANK"
    }, {
      "displayName": "Outlook Description",
      "field": "TR.IO.OUTLOOKDESCRIPTION"
    }]
  ],
  "data": [
    [
      "38143A6D2=",
      "S&P Long-term Issuer Rating",
      5,
      "Positive"
    ],
    [
      "US027988555=",
      "S&P Subordinated",
      16,
      "Positive Trend"
    ],
    [
      "00915SBG6=",
      "S&P Short-term Issuer Credit Rating",
      1,
      "Stable"
```

```
    ]
  ]
}
```

HTML Table

Instrument	Rating Source Description	Rating Rank	Outlook Description
38143A6D2=	S&P Long-term Issuer Rating	5	Positive
US02798855=	S&P Subordinated	16	Positive Trend
00915SBG6=	S&P Short-term Issuer Credit Rating	1	Stable

Example 8: Fundamental data

Request

```
{
  "instruments": ["IBM.N"],
  "fields": [{
    "name": " TR.AccountsPayable.date "
  }, {
    "name": " TR.AccountsPayable"
  }],
  "parameters": {
    "SDate": "0",
    "EDate": "-2",
```

```
    "Frq": "FY",
    "Period": "FY0
  }
}
```

Response

```
{
    "totalRowsCount": 4,
    "totalColumnsCount": 3,
    "columnHeadersCount": 1,
    "rowHeadersCount": 1,
    "headerOrientation": "horizontal",
    "headers": [
        [
            {"displayName": "Instrument"},
            {"displayName": "Date",
                "field": " TR.ACCOUNTSPAYABLE.DATE"},
            {"displayName": "Accounts Payable",
                "field": " TR.ACCOUNTSPAYABLE"}
        ]
    ],
    "data": [
        [
            "IBM.N",
            "2015-12-31T00:00:00Z ",
            6028000000
        ],
```

```
        [
            "IBM.N",
            "2014-12-31T00:00:00Z",
            6864000000
        ],
        [
            "IBM.N ",
            "2013-12-31T00:00:00Z",
            7461000000
        ]
    ]
}
```

HTML Table

Instrument	Date	Accounts Payable
IBM.N	2015-12-31T00:00:00Z	6028000000
IBM.N	2014-12-31T00:00:00Z	6864000000
IBM.N	2013-12-31T00:00:00Z	7461000000