API GUIDE: **CALENDARS**

VERSION 00.0 | FALL 2015

This document provides an outline of Benzinga.com API access to Calendar Data. For further information, please visit our website: **benzinga.com** *or call* **877-440-ZING (9464)**

CONTENTS

INTRODUCTION

The Benzinga Calendar API allows you to pull all calendar data from a single, intuitive string. By changing the calendar type and passing through a combination of parameters, you will be able to retrieve an expansive set of information in either XML or JSON format.

RESOURCE

GET /calendar

All calendar endpoint

http(s)://api.benzinga.com/api/v2/calendar/<Calendar Type>?<Parameters>

GET /calendar/<Calendar Type>

Calendar specific endpoint

http(s)://api.benzinga.com/api/v2/calendar/<Calendar Type>?<Parameters>

RETURN TYPES

Data will be provided in XML or JSON form. Upon success, it will return event data for specific calendars. XML or JSON may be selected by passing the proper header. XML is current default.

JSON Accept Header

```
Accept: application/json
```

DIVIDENDS

The dividends package covers dividends actuals. Record, payable, and ex dividend dates are all available.

COVERAGE

Equities and ETFs on major US Exchanges

HISTORICAL COVERAGE

0 years

UPDATE FREQUENCY

Within 2 hours of being released

REQUESTS

Parameter	Type	Format/ Options	Description
token REQUIRED	STRING		Client API Token.
pagesize optional, default is **50**	INT		Number of results returned. Limit 1000.
page optional, default is **0**	INT		Page offset.
parameters[date] optional	STRING	YYYY-MM-DD	Date to query for calendar data. Shorthand for `date_from` and `date_to` if they are the same. Defaults for latest.
parameters[date_from] optional	STRING	YYYY-MM-DD	Date to query from point in time.
parameters[date_to] optional	STRING	YYYY-MM-DD	Date to query to point in time.
parameters[tickers] optional	STRING	T[,...]	One or more ticker symbols separated by a comma. All calendar accept this parameter. Ignored by Economics.
parameters[updated] optional	INT	1440777968	Records last Updated Unix timestamp (UTC). This will force the sort order to be Greater Than or Equal to the timestamp indicated.
parameters[importance] optional	INT	1-5	The importance level to filter by. Uses Greater Than or Equal To the importance indicated.
parameters[date_sort] optional, default is **announced**	STRING	• announced • ex • payable • record	Dividend date field to sort on.
parameters[dividend_yield] optional	DECIMAL	.25	The dividend yield amount to filter by. Defaults to using Equal To the amount indicated. 1=100%
parameters[dividend_yield_operation] optional, default is **eq**	STRING	• gt • gte • eq • lte • lt	Specifies how to filter using dividend yield. Takes 'gt', 'gte', 'eq', 'lte', 'lt' as options, which perform 'Greater Than', 'Greater Than or Equal To', 'Equal To', 'Less Than or Equal To', and 'Less Than' filters respectively.

RESPONSES (type: dividends)

Response	Type	Expected Format	Null	Description
id	STRUCT		N	Unique ID of this entry
updated	INT		N	Last updated timestamp, UTC
active	INT		N	1 = active item / 0 = delete or hide item (with field missing, assume 1)
date	STRING	YYY-MM-DD	N	Announced Date on Calendar
time	STRING	HH:MM:SS	N	Announced Time on Calendar, 24hr format
ticker	STRING		N	Ticker Symbol (F, MSFT, etc...)
exchange	STRING		N	Exchange (NYSE, NASDAQ, etc...)
frequency	INT		Y	Frequency of the dividend
dividend	DOUBLE		Y	Dividend value
dividend_prior	DOUBLE		Y	Period prior dividend value
dividend_type	STRING		Y	Type of dividend
dividend_yield	STRING		Y	Yield of dividend
ex_dividend_date	STRING		Y	Dividend Ex Date
payable_date	STRING		Y	Dividend Payable Date
record_date	STRING		Y	Dividend Recorded Date
importance	INT	0-5	Y	Subjective Basis of How Important Event is to Market. 5 = High.

EARNINGS

The Benzinga Earings package includes 16 earnings specific data points. Example use cases include returning a list of earnings results or future dates for a ticker or list of tickers, returning earnings results per quarter, and returning a list of confirmed future earnings dates.

COVERAGE

Wilshire 5000 + 1,000 additional U.S. Securities

HISTORICAL COVERAGE

3 years

UPDATE FREQUENCY

Within 2 hours of earnings report

FUTURE EARNINGS DATES

The Benzinga Earnings endpoint can also pull future dates. Estimated vs. Confirmed dates indicators are available in the API. Future earnings dates are initially estimated through a series of algorithms. Confirmed Earnings Dates are applied based on press releases wires, investor relation websites, conference calls and speaking directly with company investor relations departments.

COVERAGE

Wilshire 5000 + 1,000 additional U.S. Securities

UPDATE FREQUENCY

Daily

CONFERENCE CALLS

The conference calls package is essentially an extension of the future earnings package. Conference call information is only available for a ticker once the earning date is confirmed for that particular ticker. Not all field information will be filled out depending on what communication channels the company utilizes.

COVERAGE

Wilshire 5000 + 1,000 additional U.S. Securities

HISTORICAL COVERAGE

0.5 years

UPDATE FREQUENCY

Daily

REQUESTS

Parameter	Type	Format/Options	Description
token REQUIRED	STRING		Client API Token.
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page optional, default is **0**	INT		Page offset.
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parameters[date_from] optional	STRING	YYYY-MM-DD	Date to query from point in time.
parameters[date_to] optional	STRING	YYYY-MM-DD	Date to query to point in time.
parameters[tickers] optional	STRING	T[,...]	One or more ticker symbols separated by a comma. All calendar accept this parameter. Ignored by Economics.
parameters[updated] optional	INT	1440777968	Records last Updated Unix timestamp (UTC). This will force the sort order to be Greater Than or Equal to the timestamp indicated.
parameters[importance] optional	INT	1-5	The importance level to filter by. Uses Greater Than or Equal To the importance indicated.
parameters[action] optional	STRING	• Upgrades • Maintains • Initiates Coverage on • Lowers • Raises • Downgrades • Terminates Coverage on	The type of action to match.

RESPONSES (type: earnings)

Response	Type	Expected Format	Null	Description
id	STRUCT		N	Unique ID of this entry
updated	INT		N	Last updated timestamp, UTC
active	INT		N	1 = active item / 0 = delete or hide item (with field missing, assume 1)
date	STRING	YYY-MM-DD	N	Announced Date on Calendar
time	STRING	HH:MM:SS	N	Announced Time on Calendar, 24hr format
ticker	STRING		N	Ticker Symbol (F, MSFT, etc...)
exchange	STRING		N	Exchange (NYSE, NASDAQ, etc...)
importance	INT	0-5	Y	Subjective Basis of How Important Event is to Market. 5 = High.
period	STRING	Q[1-4]	N	Period of the earnings actual
period_year	INT	XXXX	N	Period Year of the earnings actual
date_confirmed	STRING	Y | N	N	If the report date was confirmed (vs est)
eps	DOUBLE		Y	Comparable and Adjusted EPS
eps_estt	DOUBLE		Y	Adjusted EPS Consensus Aggregate Analyst Estimate
eps_prior	DOUBLE		Y	Adjusted EPS from Prior Period
revenue	DOUBLE		Y	Revenue
revenue_es	DOUBLE		Y	Revenue Consensus Analyst Estimate

ECONOMICS

The economics dataset covers US and major international countries in varying capacities. Please use the below guide when evaluating output.

US COVERAGE
Major datapoints

INTERNATIONAL COVERAGE
Major datapoints

HISTORICAL COVERAGE
0 years

US UPDATE FREQUENCY
Real-time

INTERNATIONAL UPDATE FREQUENCY
Daily

COUNTRIES COVERED
- United States
- Canada
- European Union
- France
- Germany
- Great Britain
- Italy
- Spain
- Australia
- China
- India
- Japan

REQUESTS

Parameter	Type	Format/ Options	Description
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parameters[date_to] optional	STRING	YYYY-MM-DD	Date to query to point in time.
parameters[tickers] optional	STRING	T[,...]	One or more ticker symbols separated by a comma. All calendar accept this parameter. Ignored by Economics.
parameters[updated] optional	INT	1440777968	Records last Updated Unix timestamp (UTC). This will force the sort order to be Greater Than or Equal to the timestamp indicated.
parameters[importance] optional	INT	1-5	The importance level to filter by. Uses Greater Than or Equal To the importance indicated.

RESPONSES (type: economics)

Response	Type	Expected Format	Null	Description
id	STRUCT		N	Unique ID of this entry
updated	INT		N	Last updated timestamp, UTC
active	INT		N	1 = active item / 0 = delete or hide item (with field missing, assume 1)
date	STRING	YYY-MM-DD	N	Announced Date on Calendar
time	STRING	HH:MM:SS	N	Announced Time on Calendar, 24hr format
importance	INT	0-5	Y	Subjective Basis of How Important Event is to Market. 5 = High.
country	STRING	Q[1-4]	N	3-Character Country Code (USA, CA, etc...)
event_name	STRING	XXXX	N	Economic Event
event_period	STRING	Y I N	N	Period of Time (Q1, September, Third Week of August,...)
period_year	INT		N	Period Year
actual	STRING		Y	Actual Data Point
consensus	STRING		Y	Consensus Estimate
prior	STRING		Y	Data Point for Prior Period
description	STRING		Y	Event Description

GUIDANCE

The guidance package returns values, often in a minimum-maximum range, for both EPS and Revenue guidance. The API also comes with a field denoting if the announcement is a preliminary earnings announcement.

COVERAGE

Wilshire 5000 + 1,000 additional U.S. Securities

HISTORICAL COVERAGE

3 years

UPDATE FREQUENCY

Within 2 hours

REQUESTS

Parameter	Type	Format/ Options	Description
token REQUIRED	STRING		Client API Token.
pagesize optional, default is **50**	INT		Number of results returned. Limit 1000.
page optional, default is **0**	INT		Page offset.
parameters[date] optional	STRING	YYYY-MM-DD	Date to query for calendar data. Shorthand for `date_from` and `date_to` if they are the same. Defaults for latest.
parameters[date_from] optional	STRING	YYYY-MM-DD	Date to query from point in time.
parameters[date_to] optional	STRING	YYYY-MM-DD	Date to query to point in time.
parameters[tickers] optional	STRING	T[,...]	One or more ticker symbols separated by a comma. All calendar accept this parameter. Ignored by Economics.
parameters[updated] optional	INT	1440777968	Records last Updated Unix timestamp (UTC). This will force the sort order to be Greater Than or Equal to the timestamp indicated.
parameters[importance] optional	INT	1-5	The importance level to filter by. Uses Greater Than or Equal To the importance indicated.

RESPONSES (type: guidance)

Response	Type	Expected Format	Null	Description
id	STRUCT		N	Unique ID of this entry
updated	INT		N	Last updated timestamp, UTC
active	INT		N	1 = active item / 0 = delete or hide item (with field missing, assume 1)
date	STRING	YYY-MM-DD	N	Announced Date on Calendar
time	STRING	HH:MM:SS	N	Announced Time on Calendar, 24hr format
ticker	STRING		N	Ticker Symbol (F, MSFT, etc...)
exchange	STRING		N	Exchange (NYSE, NASDAQ, etc...)
importance	INT	0-5	Y	Subjective Basis of How Important Event is to Market. 5 = High.
period	STRING	Q[1-4], FY[10]	N	Period of the earnings actual
period_year	INT	XXXX	N	Period Year of the earnings actual
date_confirmed	STRING	Y | N	N	If the report date was confirmed (vs est)
eps_guidance_max	DOUBLE		Y	Adjusted EPS Guidance Max
eps_guidance_min	DOUBLE		Y	Adjusted EPS Guidance Min
eps_guidance_est	DOUBLE		Y	Adjusted EPS Consensus Estimate
eps_guidance_prior_max	DOUBLE		Y	Adjusted EPS from Prior Period Max
eps_guidance_prior_min	DOUBLE		Y	Adjusted EPS from Prior Period Min
revenue_guidance_max	DOUBLE		Y	Revenue Max
revenue_guidance_min	DOUBLE		Y	Revenue Min
revenue_guidance_est	DOUBLE		Y	Revenue Consensus Analyst Estimate
prelim	DOUBLE	Y | N	N	If this guidance is a preliminary earnings report

IPOS

Companies are tracked from the initial S-1 filing until shares open for trade. Data points include expected open date, offer size, pricing and projected proceeds.

COVERAGE
Equities on major US Exchanges

HISTORICAL COVERAGE
0 years

UPDATE FREQUENCY
Daily

REQUESTS

Parameter	Type	Format/ Options	Description
token REQUIRED	STRING		Client API Token.
pagesize optional, default is **50**	INT		Number of results returned. Limit 1000.
page optional, default is **0**	INT		Page offset.
parameters[date] optional	STRING	YYYY-MM-DD	Date to query for calendar data. Shorthand for `date_from` and `date_to` if they are the same. Defaults for latest.
parameters[date_from] optional	STRING	YYYY-MM-DD	Date to query from point in time.
parameters[date_to] optional	STRING	YYYY-MM-DD	Date to query to point in time.
parameters[tickers] optional	STRING	T[,...]	One or more ticker symbols separated by a comma. All calendar accept this parameter. Ignored by Economics.
parameters[updated] optional	INT	1440777968	Records last Updated Unix timestamp (UTC). This will force the sort order to be Greater Than or Equal to the timestamp indicated.
parameters[importance] optional	INT	1-5	The importance level to filter by. Uses Greater Than or Equal To the importance indicated.

RESPONSES (type: ipos)

Response	Type	Expected Format	Null	Description
id	STRUCT		N	Unique ID of this entry
updated	INT		N	Last updated timestamp, UTC
active	INT		N	1=active item / 0=delete or hide item (with field missing, assume 1)
date	STRING	YYY-MM-DD	N	Date of IPO
time	STRING	HH:MM:SS	N	Time of IPO
pricing_date	STRING		Y	Date of IPO Pricing
price_min	DOUBLE		Y	Minimum Open Price
price_max	DOUBLE		Y	Maximum Open Price
deal_status	STRING		Y	Deal Status
insider_lockup_days	INT		Y	Insider lockup period in days
insider_lockup_date	STRING	YYY-MM-DD	Y	Insider lockup date
offering_value	INT		Y	Offer value
offering_shares	INT		Y	Offer Shares
shares_outstanding	INT		Y	Shares Outstanding
shares_from_selling_holders	INT		Y	Shares Offer by Holders
lead_underwriters	STRUCT		Y	List of Lead Underwriter(s)
other_underwriters	STRUCT		Y	List of Other/Secondary Underwriter(s)
underwriter_quiet_expiration_days	INT		Y	Underwriter quiet expiration period in days
underwriter_quiet_expiration_date	INT	YYY-MM-DD	Y	Underwriter quiet expiration date

RATINGS

The Benzinga Analyst Ratings data set contains coverage from all major sell-side research firms. The set is populated with 125 – 180 new ratings per day. The data set includes the actual rating and prior rating, as well as price target and prior price target.

COVERAGE

130 Research Firms, Major US Exchanges

HISTORICAL COVERAGE

3 years

UPDATE FREQUENCY

Daily

REQUESTS

Parameter	Type	Format/Options	Description
token REQUIRED	STRING		Client API Token.
pagesize optional, default is **50**	INT		Number of results returned. Limit 1000.
page optional, default is **0**	INT		Page offset.
parameters[date] optional	STRING	YYYY-MM-DD	Date to query for calendar data. Shorthand for `date_from` and `date_to` if they are the same. Defaults for latest.
parameters[date_from] optional	STRING	YYYY-MM-DD	Date to query from point in time.
parameters[date_to] optional	STRING	YYYY-MM-DD	Date to query to point in time.
parameters[tickers] optional	STRING	T[,...]	One or more ticker symbols separated by a comma. All calendar accept this parameter. Ignored by Economics.
parameters[updated] optional	INT	1440777968	Records last Updated Unix timestamp (UTC). This will force the sort order to be Greater Than or Equal to the timestamp indicated.
parameters[importance] optional	INT	1-5	The importance level to filter by. Uses Greater Than or Equal To the importance indicated.
parameters[eps_surprise_percent] optional	DOUBLE	35.7	The eps surprise percent to filter by. Give in the form of a number ('34.6%'=>34.6). Uses Greater Than or Equal To the surprise percent indicated.
parameters[revenue_surprise_percent] optional	DOUBLE	35.7	The revenue surprise percent to filter by. Give in the form of a number ('34.6%'=>34.6). Uses Greater Than or Equal To the surprise percent indicated.

RESPONSES (type: ratings)

Response	Type	Expected Format	Null	Description
id	STRUCT		N	nique ID of this entry
updated	INT		N	Last updated timestamp, UTC
active	INT		N	1 = active item / 0 = delete or hide item (with field missing, assume 1)
date	STRING	YYY-MM-DD	N	Announced Date on Calendar
time	STRING	HH:MM:SS	N	Announced Time on Calendar, 24hr format
ticker	STRING		N	Ticker Symbol (F, MSFT, etc...)
exchange	STRING		N	Exchange (NYSE, NASDAQ, etc...)
importance	INT	0-5	Y	Subjective Basis of How Important Event is to Market. 5 = High.
analyst	STRING		Y	Analyst Firm
action_pt	STRING		N	Action on Price Target (Raises, Lowers)
action_company	STRING		N	Action on Company (Upgrades, Downgrades...)
ptpo	STRING		N	PTPO
rating_prior	STRING		N	Prior Rating
pt_prior	INT		N	Prior Price Target
rating_current	STRING		N	Current Rating
pt_current	INT		N	Current Price Target

RETAIL SALES

The retail sales dataset includes basic coverage of reported numbers with percentage beat/miss.

COVERAGE
Major US exchanges

HISTORICAL COVERAGE
0 years

UPDATE FREQUENCY
Daily

SPLITS

Along with new split announcements, Benzinga's dataset includes historic splits and price performance one week and one month after the splits.

COVERAGE
Equities on major US Exchanges & select OTC stocks

HISTORICAL COVERAGE
0 years

UPDATE FREQUENCY
Daily

REQUESTS

Parameter	Type	Format/Options	Description
token REQUIRED	STRING		Client API Token.
pagesize optional, default is **50**	INT		Number of results returned. Limit 1000.
page optional, default is **0**	INT		Page offset.
parameters[date] optional	STRING	YYYY-MM-DD	Date to query for calendar data. Shorthand for `date_from` and `date_to` if they are the same. Defaults for latest.
parameters[date_from] optional	STRING	YYYY-MM-DD	Date to query from point in time.
parameters[date_to] optional	STRING	YYYY-MM-DD	Date to query to point in time.
parameters[tickers] optional	STRING	T[,...]	One or more ticker symbols separated by a comma. All calendar accept this parameter. Ignored by Economics.
parameters[updated] optional	INT	1440777968	Records last Updated Unix timestamp (UTC). This will force the sort order to be Greater Than or Equal to the timestamp indicated.
parameters[importance] optional	INT	1-5	The importance level to filter by. Uses Greater Than or Equal To the importance indicated.

RESULTS (type: splits)

Response	Type	Expected Format	Null	Description
id	STRUCT		N	Unique ID of this entry
updated	INT		N	Last updated timestamp, UTC
active	INT		N	1 = active item / 0 = delete or hide item (with field missing, assume 1)
date	STRING	YYY-MM-DD	N	Announced Date on Calendar
time	STRING	HH:MM:SS	N	Announced Time on Calendar, 24hr format
ticker	STRING		N	Ticker Symbol (F, MSFT, etc...)
exchange	STRING		N	Exchange (NYSE, NASDAQ, etc...)
importance	INT	0-5		Subjective Basis of How Important Event is to Market. 5 = High.
ratio	STRING	x/x		Ratio of the split
optionable	STRING			Is the split optionable?
date_ex	STRING	YYY-MM-DD	Y	Ex Date
date_recorded	STRING	YYY-MM-DD	Y	Recorded Date
date_distribution	STRING	YYY-MM-DD	Y	Distribution Date

EXAMPLES

The Benzinga API can be returned in either XML or JSON format. XML is the default return method. To return JSON, please refer to Return Types on page 3. The query string format and parameters remain the same between both outputs formats. Below are two examples–one basic and one with many parameters–to help you understand querying with the API. If you need additional clarification please email partners@benzinga.com

XML RETURN VALUE

```
http://api.benzinga.com/api/v2/calendar?token=TOKEN&page=1&pagesize=1
```

```
<?xml version="1.0" encoding="utf-8"?>
<result>
    <earnings is_array="true">
        <item>
        <id>55bda413c4d51a5545030ef2</id>
        <date>2016-10-27</date>
        <time>16:00:00</time>
        <ticker>CORI</ticker>
        <exchange>NASDAQ</exchange>
        <name>Corium International</name>
        <period>Q3</period>
        <period_year>2016</period_year>
        <importance>0</importance>
        <updated>1440162032</updated>
        <date_confirmed>0</date_confirmed>
        </item>
    </earnings>
</result>
```

JSON RETURN VALUE

http://api.benzinga.com/api/v2/calendar/earnings?token=TOKEN&parameters[tickers]=MSFT&parameters[date_from]=2013-01-01&parameters[date_to]=2014-01-01&page=0&pagesize=2


```
{
  "earnings": [
    {
      "id": "52680e374309aa05985eb624",
      "date": "2013-10-24",
      "time": "16:02",
      "ticker": "MSFT",
      "exchange": "NASDAQ",
      "name": "Microsoft Corporation",
      "period": "Q1",
      "period_year": 2014,
      "eps": 0.62,
      "eps_est": 0.54,
      "eps_prior": 0.53,
      "eps_surprise": 0.08,
      "eps_surprise_percent": 14.81,
      "revenue": 18529000000,
      "revenue_est": 17790000000,
      "revenue_prior": "16010000000.000",
      "revenue_surprise": 739000000,
      "revenue_surprise_percent": 4.15,
      "importance": "5",
      "updated": 1394922617,
      "date_confirmed": 0
    },
    {
      "id": "51d44bff4309aa73ae82e8a5",
      "date": "2013-07-18",
      "time": "16:02",
      "ticker": "MSFT",
      "exchange": "NASDAQ",
      "name": "Microsoft Corporation",
      "period": "Q4",
      "period_year": 2013,
      "eps": 0.66,
      "eps_est": 0.75,
      "eps_prior": 0.67,
      "eps_surprise": -0.09,
      "eps_surprise_percent": 12,
      "revenue": 19896000000,
      "revenue_est": 20790000000,
      "revenue_prior": "18060000000.000",
      "revenue_surprise": -894000000,
      "revenue_surprise_percent": 4.3,
      "importance": "5",
      "updated": 1394922737,
      "date_confirmed": 0
    }
  ]
}
```