Derq INSIGHT API

API Documentation for Safety Insights, Vehicle Counts, VRU Counts and Speed Distribution



Derq USA, Inc.
Confidential and Proprietary



Location ID

For each API call, you will need to use locationId and an Auth Key.

Location ID specifies the site for which to fetch the events for. The Location IDs can be fetched by calling the Locations API.

Auth Key



The Auth Key will be provided to the customer separately.

Limitation

Please note that you cannot query more than 30 days of data with one single request.

Safety Insights API

URL: https://api-external.cloud.derg.com/safety-insights

Request Parameters:

locationId: string (This is required)

startDate: string (date-time)

Start date for the count range (Must be in ISO Time Format)



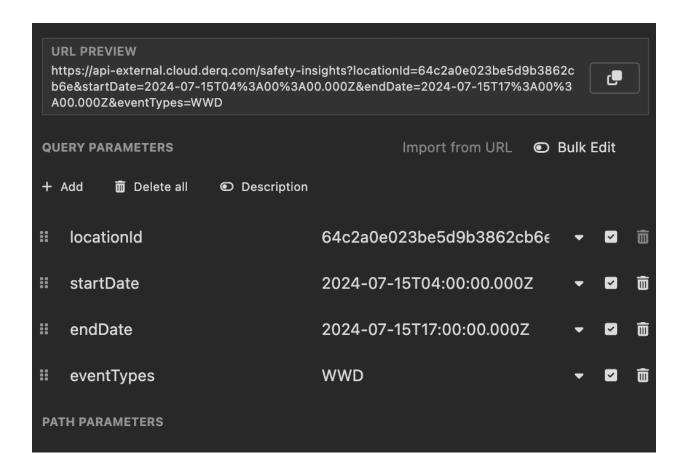
endDate: string (date-time)

End date for the count range (Must be in ISO Time Format)

eventTypes: string

[A comma-separated list of valid event type codes, one, many or all of ['IC', 'WWD', 'STPV', 'TV', 'LCV', 'RLV', 'NM-VV', 'NM-VRU' and 'CRSH']

Sample Request:





```
Java
{
     "statusCode": "200",
     "body": [
          {
               "EventType": "WWD",
               "EventId": "66953b79b32af200116f7d6a",
               "TimeAtSite": "2024-07-15T11:08:41.025",
               "DetectionArea": "West Leg",
               "Direction": "East",
               "CameraId": "0"
          },
          {
               "EventType": "WWD",
               "EventId": "669554c07ea7e50012f89234",
               "TimeAtSite": "2024-07-15T12:56:31.850",
               "DetectionArea": "North Leg",
               "Direction": "South",
               "CameraId": "0"
          }
}
```



```
"EventType": "TV",
               "EventId": "6694a02615673d001333d974",
               "TimeAtSite": "2024-07-15T00:05:58.591",
               "DetectionArea": "North Leg",
               "Direction": "North",
               "CameraId": "0",
               "Movement": "UT"
          },
          {
               "EventType": "TV",
               "EventId": "6694ad7915673d001333df2c",
               "TimeAtSite": "2024-07-15T01:02:49.578",
               "DetectionArea": "North Leg",
               "Direction": "North",
               "CameraId": "0",
               "Movement": "UT"
          },
               "EventType": "TV",
               "EventId": "6694e08db32af200116f55d0",
               "TimeAtSite": "2024-07-15T04:40:45.793",
               "DetectionArea": "North Leg",
               "Direction": "North",
               "CameraId": "0",
               "Movement": "UT"
          }
    1
}
```



```
Java
{
     "statusCode": "200",
     "body": [
          {
               "EventType": "IC",
               "EventId": "6694a944e8e9df0012d42162",
               "TimeAtSite": "2024-07-15T00:44:52.004",
               "DetectionArea": "East Leg",
               "CameraId": "0"
          },
               "EventType": "IC",
               "EventId": "6694ac78b32af200116f4013",
               "TimeAtSite": "2024-07-15T00:58:31.988",
               "DetectionArea": "North Leg",
               "CameraId": "0"
          }
}
```



```
"EventId": "6694a1d5e8e9df0012d41e38".
     "TimeAtSite": "2024-07-15T00:13:09.348",
     "DetectionArea": "South Leg",
     "Direction": "South",
     "CameraId": "0"
},
     "EventType": "STPV",
     "EventId": "6694a1e315673d001333da3d",
     "TimeAtSite": "2024-07-15T00:13:23.429",
     "DetectionArea": "South Leg",
     "Direction": "South",
     "CameraId": "0"
},
     "EventType": "STPV",
     "EventId": "6694a32615673d001333dacb",
     "TimeAtSite": "2024-07-15T00:18:46.632",
     "DetectionArea": "South Leg",
     "Direction": "South",
     "CameraId": "0"
},
     "EventType": "STPV",
     "EventId": "6694a741b4fe710012fffc30",
     "TimeAtSite": "2024-07-15T00:36:17.610",
     "DetectionArea": "South Leg",
     "Direction": "South",
     "CameraId": "0"
}
```



```
]
```

```
Java
{
     "statusCode": "200",
     "body": [
               "EventType": "LCV",
               "EventId": "66949ec8e8e9df0012d41cf5",
               "TimeAtSite": "2024-07-15T00:00:08.548",
               "DetectionArea": "West Leg",
               "CameraId": "0"
          },
               "EventType": "LCV",
               "EventId": "66949f5d7ea7e50012f84313",
               "TimeAtSite": "2024-07-15T00:02:37.252",
               "DetectionArea": "East Leg",
               "CameraId": "0"
          },
               "EventType": "LCV",
               "EventId": "6694a026b32af200116f3ad6",
               "TimeAtSite": "2024-07-15T00:05:58.292",
               "DetectionArea": "North Leg",
               "CameraId": "0"
          },
```



```
{
     "EventType": "LCV",
     "EventId": "6694a041e8e9df0012d41d96",
     "TimeAtSite": "2024-07-15T00:06:25.129",
     "DetectionArea": "East Leg",
     "CameraId": "0"
},
     "EventType": "LCV",
     "EventId": "6694a2acb32af200116f3bef",
     "TimeAtSite": "2024-07-15T00:16:44.013",
     "DetectionArea": "West Leg",
     "CameraId": "0"
},
     "EventType": "LCV",
     "EventId": "6694a2f0e8e9df0012d41eb4",
     "TimeAtSite": "2024-07-15T00:17:52.764",
     "DetectionArea": "East Leg",
     "CameraId": "0"
},
     "EventType": "LCV",
     "EventId": "6694a2f2b4fe710012fffa6a",
     "TimeAtSite": "2024-07-15T00:17:54.572",
     "DetectionArea": "East Leg",
     "CameraId": "0"
},
     "EventType": "LCV",
```



```
"EventId": "6694a4501d317200121ae8f1",
     "TimeAtSite": "2024-07-15T00:23:43.978",
     "DetectionArea": "East Leg",
     "CameraId": "0"
},
{
     "EventType": "LCV",
     "EventId": "6694a5fc15673d001333dc0d",
     "TimeAtSite": "2024-07-15T00:30:52.533",
     "DetectionArea": "East Leg",
     "CameraId": "0"
},
{
     "EventType": "LCV",
     "EventId": "6694a676b32af200116f3d8f",
     "TimeAtSite": "2024-07-15T00:32:53.715",
     "DetectionArea": "North Leg",
     "CameraId": "0"
},
{
     "EventType": "LCV",
     "EventId": "6694a67ae8e9df0012d42030",
     "TimeAtSite": "2024-07-15T00:32:58.431",
     "DetectionArea": "North Leg",
     "CameraId": "0"
},
{
     "EventType": "LCV",
     "EventId": "6694aa291d317200121aeb70",
     "TimeAtSite": "2024-07-15T00:48:41.221",
```





```
"EventId": "6694a07015673d001333d99d",
     "TimeAtSite": "2024-07-15T00:07:11.874",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a0cbb4fe710012fff979",
     "TimeAtSite": "2024-07-15T00:08:42.952",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a11ab4fe710012fff997",
     "TimeAtSite": "2024-07-15T00:10:02.799",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a1657ea7e50012f843f1",
     "TimeAtSite": "2024-07-15T00:11:13.685",
     "DetectionArea": "South Leg",
```



```
"Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
{
     "EventType": "RLV",
     "EventId": "6694a1eae8e9df0012d41e48",
     "TimeAtSite": "2024-07-15T00:13:30.474",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a3007ea7e50012f8449d",
     "TimeAtSite": "2024-07-15T00:18:07.960",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a33de8e9df0012d41ed2",
     "TimeAtSite": "2024-07-15T00:19:08.832",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
```



```
},
     "EventType": "RLV",
     "EventId": "6694a3b9b4fe710012fffab7",
     "TimeAtSite": "2024-07-15T00:21:13.583",
     "DetectionArea": "North Leg",
     "Direction": "South",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a44415673d001333db4a",
     "TimeAtSite": "2024-07-15T00:23:32.733",
     "DetectionArea": "North Leg",
     "Direction": "South",
     "CameraId": "0",
     "Movement": "TH"
},
{
     "EventType": "RLV",
     "EventId": "6694a445e8e9df0012d41f47",
     "TimeAtSite": "2024-07-15T00:23:32.928",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
```



```
"EventId": "6694a48be8e9df0012d41f64",
     "TimeAtSite": "2024-07-15T00:24:43.232",
     "DetectionArea": "North Leg",
     "Direction": "South",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a5f5e8e9df0012d41ffb",
     "TimeAtSite": "2024-07-15T00:30:44.818",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
{
     "EventType": "RLV",
     "EventId": "6694a603b32af200116f3d5e",
     "TimeAtSite": "2024-07-15T00:30:59.062",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a6d1b32af200116f3dac",
     "TimeAtSite": "2024-07-15T00:34:25.190",
     "DetectionArea": "South Leg",
```



```
"Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
{
     "EventType": "RLV",
     "EventId": "6694a833e8e9df0012d420e5",
     "TimeAtSite": "2024-07-15T00:40:19.552",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a870e8e9df0012d42100",
     "TimeAtSite": "2024-07-15T00:41:20.173",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694a97d15673d001333dd87",
     "TimeAtSite": "2024-07-15T00:45:49.309",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
```



```
},
     "EventType": "RLV",
     "EventId": "6694aa027ea7e50012f8479f",
     "TimeAtSite": "2024-07-15T00:48:02.215",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694aa177ea7e50012f847a5",
     "TimeAtSite": "2024-07-15T00:48:23.131",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
{
     "EventType": "RLV",
     "EventId": "6694aa571d317200121aeb86",
     "TimeAtSite": "2024-07-15T00:49:27.328",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
```



```
"EventId": "6694aaa57ea7e50012f847e0",
     "TimeAtSite": "2024-07-15T00:50:45.519",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694ab331d317200121aebe2",
     "TimeAtSite": "2024-07-15T00:53:07.431",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694ab6ce8e9df0012d42252",
     "TimeAtSite": "2024-07-15T00:54:04.319",
     "DetectionArea": "South Leg",
     "Direction": "North",
     "CameraId": "0",
     "Movement": "TH"
},
     "EventType": "RLV",
     "EventId": "6694abfb1d317200121aec31",
     "TimeAtSite": "2024-07-15T00:56:27.243",
     "DetectionArea": "South Leg",
```



```
"Direction": "North",
               "CameraId": "0",
               "Movement": "TH"
          },
          {
               "EventType": "RLV",
               "EventId": "6694ac037ea7e50012f8487a",
               "TimeAtSite": "2024-07-15T00:56:35.775",
               "DetectionArea": "South Leg",
               "Direction": "North",
               "CameraId": "0",
               "Movement": "TH"
          },
               "EventType": "RLV",
               "EventId": "6694ac407ea7e50012f84896",
               "TimeAtSite": "2024-07-15T00:57:36.373",
               "DetectionArea": "South Leg",
               "Direction": "North",
               "CameraId": "0",
               "Movement": "TH"
}
```



Vehicle Counts API

URL: https://api-external.cloud.derg.com/counts/vehicle

Request Parameters:

locationId: string (This is required)

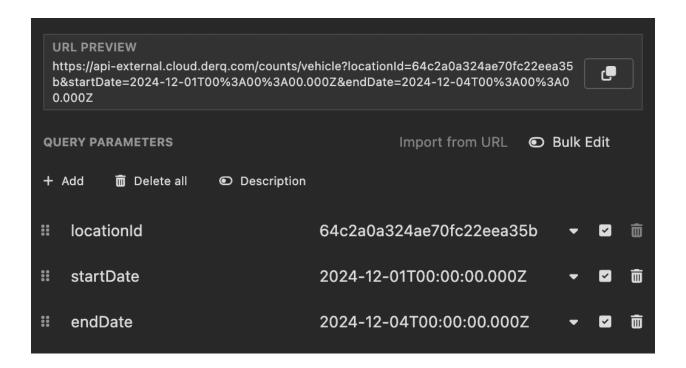
startDate: string (date-time)

Start date for the count range (Must be in ISO Time Format)

endDate: string (date-time)

End date for the count range (Must be in ISO Time Format)

Sample Request:





```
Java
{
      "statusCode": "200",
      "body": [
             {
                    "count": 3,
                    "date": "2024-11-30",
                    "timeInterval": "07:00 PM - 07:04 PM",
                    "approach": "NB",
                    "class": "passenger_vehicle"
             },
                    "count": 12,
                    "date": "2024-11-30",
                    "timeInterval": "07:00 PM - 07:04 PM",
                    "approach": "SB",
                    "class": "passenger_vehicle"
             },
             {
                    "count": 31,
                    "date": "2024-11-30",
                    "timeInterval": "07:00 PM - 07:04 PM",
                    "approach": "EB",
                    "class": "passenger_vehicle"
             },
                    "count": 36,
                    "date": "2024-11-30",
                    "timeInterval": "07:00 PM - 07:04 PM",
                    "approach": "WB",
                    "class": "passenger_vehicle"
             },
```



```
{
      "count": 7,
       "date": "2024-11-30",
      "timeInterval": "07:05 PM - 07:09 PM",
      "approach": "NB",
      "class": "passenger_vehicle"
},
{
      "count": 4,
      "date": "2024-11-30",
      "timeInterval": "07:05 PM - 07:09 PM",
      "approach": "SB",
      "class": "passenger_vehicle"
},
      "count": 27,
      "date": "2024-11-30",
      "timeInterval": "07:05 PM - 07:09 PM",
      "approach": "EB",
       "class": "passenger_vehicle"
},
{
      "count": 13,
      "date": "2024-11-30",
      "timeInterval": "07:05 PM - 07:09 PM",
      "approach": "WB",
      "class": "passenger_vehicle"
},
      "count": 1,
      "date": "2024-11-30",
      "timeInterval": "07:10 PM - 07:14 PM",
       "approach": "NB",
      "class": "passenger_vehicle"
},
{
      "count": 7,
      "date": "2024-11-30",
       "timeInterval": "07:10 PM - 07:14 PM",
       "approach": "SB",
```



```
"class": "passenger_vehicle"
},
{
    "count": 25,
    "date": "2024-11-30",
    "timeInterval": "07:10 PM - 07:14 PM",
    "approach": "EB",
    "class": "passenger_vehicle"
},
{
    "count": 20,
    "date": "2024-11-30",
    "timeInterval": "07:10 PM - 07:14 PM",
    "approach": "WB",
    "class": "passenger_vehicle"
}
```

VRU Counts API

URL: https://api-external.cloud.derq.com/counts/vru

Request Parameters:

locationId: string (This is required)

startDate: string (date-time)

Start date for the count range (Must be in ISO Time Format)

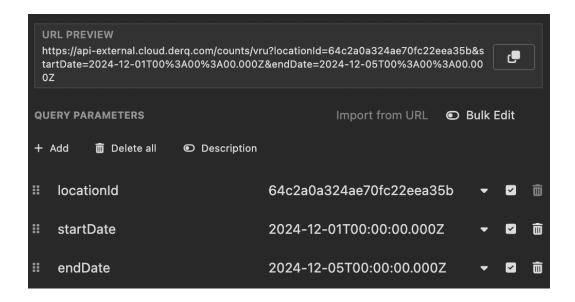
endDate: string (date-time)

End date for the count range (Must be in ISO Time Format)

Sample Request:

Derq USA, Inc. Confidential and Proprietary





```
Java
       "statusCode": "200",
      "body": [
             {
                    "count": 1,
                    "date": "2024-11-30",
                    "timeInterval": "07:00 PM - 07:04 PM",
                    "approach": "EB",
                    "class": "pedestrian"
              },
                    "count": 1,
                    "date": "2024-11-30",
                    "timeInterval": "07:05 PM - 07:09 PM",
                    "approach": "WB",
                    "class": "pedestrian"
             },
```



```
"count": 2,
                    "date": "2024-11-30",
                     "timeInterval": "07:10 PM - 07:14 PM",
                    "approach": "NB",
                    "class": "pedestrian"
              },
                    "count": 1,
                    "date": "2024-11-30",
                    "timeInterval": "07:15 PM - 07:19 PM",
                    "approach": "SB",
                    "class": "pedestrian"
              },
              {
                    "count": 1,
                    "date": "2024-11-30",
                    "timeInterval": "07:15 PM - 07:19 PM",
                    "approach": "WB",
                    "class": "pedestrian"
              }
      1
}
```

Ollie.Wiesner@seattle.gov

End date for the count range (Must be in ISO Time Format)

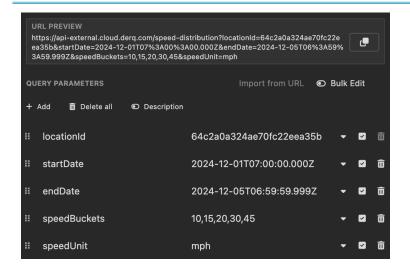
speedBuckets: string

Enter speed buckets in comma separated format as you would like vehicles in specific speed buckets to be counted. For example, if you want vehicles counted in the speed buckets: 0-9 mph, 10-14 mph, 15-19 mph, 20-29 mph, 30-44 mph and 45+ mph; then pass the following in this request parameter: 10,15,20,30,45

speedUnit: string (mph or kph depending on your preference)

Sample Request:





```
Java
{
       "statusCode": "200",
       "body": [
                     "speedinterval": "00-09 mph",
                     "approach": "EB",
                     "count": 2259
              },
                     "speedinterval": "00-09 mph",
                     "approach": "NB",
                     "count": 1704
              },
                     "speedinterval": "00-09 mph",
                     "approach": "SB",
                     "count": 5758
              },
              {
                     "speedinterval": "00-09 mph",
                     "approach": "WB",
```



```
"count": 3242
},
      "speedinterval": "10-14 mph",
      "approach": "EB",
      "count": 1928
},
{
      "speedinterval": "10-14 mph",
      "approach": "NB",
      "count": 1336
},
      "speedinterval": "10-14 mph",
      "approach": "SB",
      "count": 1601
},
      "speedinterval": "10-14 mph",
      "approach": "WB",
      "count": 2832
},
      "speedinterval": "15-19 mph",
      "approach": "EB",
      "count": 2320
},
{
      "speedinterval": "15-19 mph",
      "approach": "NB",
      "count": 711
},
{
      "speedinterval": "15-19 mph",
      "approach": "SB",
      "count": 779
},
{
      "speedinterval": "15-19 mph",
      "approach": "WB",
```



```
"count": 4259
},
      "speedinterval": "20-29 mph",
      "approach": "EB",
      "count": 5066
},
{
      "speedinterval": "20-29 mph",
      "approach": "NB",
      "count": 201
},
      "speedinterval": "20-29 mph",
      "approach": "SB",
      "count": 511
},
      "speedinterval": "20-29 mph",
      "approach": "WB",
      "count": 5481
},
      "speedinterval": "30-44 mph",
      "approach": "EB",
      "count": 17264
},
{
      "speedinterval": "30-44 mph",
      "approach": "NB",
      "count": 10
},
{
      "speedinterval": "30-44 mph",
      "approach": "SB",
      "count": 15
},
{
      "speedinterval": "30-44 mph",
      "approach": "WB",
```



```
"count": 3634
              },
                     "speedinterval": "45+ mph",
                     "approach": "EB",
                     "count": 2847
              },
              {
                     "speedinterval": "45+ mph",
                     "approach": "NB",
                     "count": 1
              },
                     "speedinterval": "45+ mph",
                     "approach": "WB",
                     "count": 125
              },
              {
                     "speedinterval": null,
                     "approach": "EB",
                     "count": 2
              },
                     "speedinterval": null,
                     "approach": "SB",
                     "count": 87
              },
              {
                     "speedinterval": null,
                     "approach": "WB",
                     "count": 1
              }
      ]
}
```



Locations API

URL: https://api-external.cloud.derq.com/locations

Request Parameters:

None

Response Parameters: