



How to Use Swagger to Test the Carbon API Endpoints

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Version: 23 April 2023

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How to Use Swagger to Test the Carbon API Endpoints

This document describes how to access and execute the API endpoints as documented by Swagger. A minimal web service which calls Carbon internally could be published and visible on localhost, a LAN server or a cloud server.

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OPEN SWAGGER

- Follow this link

<https://rcsapps.azurewebsites.net/carbon/swagger/index.html>

GET AN AUTHORISATION

- Scroll down to /session/start/free
- Click Try it Out.



- Scroll down a bit and click Execute

Session

POST

`/session/start/free` Starts a web service session using the restricted free licensing

Parameters

No parameters

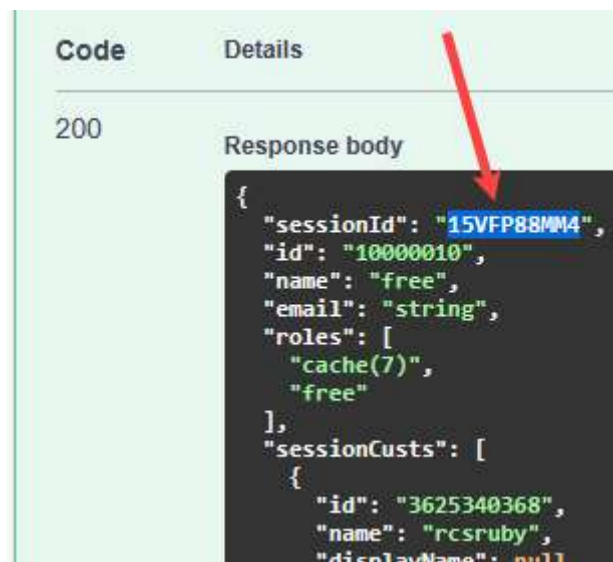
Request body

A serialized `AuthenticateFreeRequest` provided in the request body.

```
{
  "email": "string",
  "skipCache": true
}
```

Execute

- Scroll down to the response body
- Select and copy the session ID



The screenshot shows the 'Response body' of an API call. The status code is 200. The response is a JSON object. The 'sessionId' field is highlighted in blue, and a red arrow points to it. The JSON structure is as follows:

```
{
  "sessionId": "15VFP88MM4",
  "id": "10000010",
  "name": "free",
  "email": "string",
  "roles": [
    "cache(7)",
    "free"
  ],
  "sessionCusts": [
    {
      "id": "3625340368",
      "name": "rcsruby",
      "displayName": null
    }
  ]
}
```

This is the magic string which activates the rest of the API. The rest of the response is a list of the jobs which can be opened with the free licence.

- Scroll to the top of the page and click the Authorize button

Authorize



- Paste the sessionId to the Value field and click Authorize.

Available authorizations

basic (apiKey)

Simple authorisation using a request header.

Name: x-session-id

In: header

Value:

You should see this:

Available authorizations

basic (apiKey)

Authorized

Simple authorisation using a request header.

Name: x-session-id

In: header

Value: *****

- Close the Authorize form

A full login using your own RCS credentials instead of the free licence is at

POST /session/start/login/id

OPEN A JOB

- Scroll down to /job/open

POST /job/open Opens a cloud job and selects it for the crosstab engine.

- Open the node
- Click Try it out
- Edit the request as

A serialized `OpenCloudJobRequest` provided in the request body.

```
{
  "customerName": "client1rcs",
  "jobName": "demo",
  "vartreeName": "vartree.vtr",
  "getDisplayProps": true,
  "getVartreeNames": true,
  "getAxisTreeNames": true,
  "tocType": 0,
  "getDrills": true
}
```

- Click Execute

You should see

Curl

```
curl -X 'POST' \
  'https://rcsapps.azurewebsites.net/carbon/job/open' \
  -H 'accept: application/json' \
  -H 'x-session-id: 15VFP88MM4' \
  -H 'Content-Type: application/json' \
  -d '{
    "customerName": "client1rcs",
    "jobName": "demo",
    "vartreeName": "vartree.vtr",
    "getDisplayProps": true,
    "getVartreeNames": true
  }'
```

The response body is a Json representation of the job properties, starting with the default table properties and ending with the variable trees, axes tree, drill filters, other job details.

Code	Details
200	<p>Response body</p> <pre>{ "dProps": { "titles": { "name": { "visible": true, "font": { "name": "Arial", "size": 10, "style": 0, "hAlign": 0, </pre>

GENERATE A TABLE

Carbon starts with a *tabula rasa* for properties. Unless the appropriate visibility properties are set, you won't see the table part of the response body. The appendix to this document has a full table request (for copy/paste) but for completeness, these are the minimal required edits:

- Scroll to `/job/gentab/`

POST `/job/gentab` Generates a crosstab report in different formats.

- Click *Try it out*
- Make these edits to the request

A serialized `GenTabRequest` provided in the request body.

```
{
  "name": "MyTestTable",
  "top": "EDU",
  "side": "INC",
  "filter": "Region(1)",
  "weight": "",
  "sProps": {
    "caseFilter": "",
    "initAsMissing": true,
    "excludeNE": true,
    "padHierarchics": true,
    "arithOverStats": true,
    "topInsert": "",
    "sideInsert": "",
    "level": "string"
  },
  "dProps": {
```

- Scroll down about 80% and change `blankChar` to a hyphen

```
    "missingAsZero": true,
    "missingAsBlank": true,
    "zeroAsBlank": true,
    "blankAsChar": true,
    "blankChar": "-",
    "percentsAsProportions": true,
    "showRedundant100": true
  },
```

- Scroll to the end and change `output format` to a 1 (meaning, please do show something)

```
    "output": {
      "format": 1
    },
    "corner": {
      "priority": 0
    }
  }
}
```


- Scroll a long way back up and click Execute
- Scroll a long way back down to the response body.

Should now appear as

```
Response body
<ArrayOfString xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www
  <string>Name: MyTestTable</string>
  <string>Top: EDU</string>
  <string>Side: INC</string>
  <string>Filter: Region(1)</string>
  <string>Weight: </string>
  <string>Status: ArithOverStats PadHierarchics ExcludeNE InitAsMissing ColSort on 0 Firs
  <string>      5 - GRADUATE      3 - JUNIOR COLLEGE      4 - BACHELOR      1 - LT HIGH SCHOO
  <string>1 - Under $10k      12      15      36      55!!!      153!!! </string>
  <string>      0%      0%      0%      0%!!!      0%!!! </string>
  <string>      0%      0%      0%      0%!!!      1%!!! </string>
  <string>      z=-3      z=-2      z=-2      z=6!!!      z=1!!! </string>
  <string>      p=1!!!      p=1!!! </string>
  <string>2 - $10k to 20k      13      24      32      43!!!      190!!! </string>
  <string>      0%      0%      0%      0%!!!      0%!!! </string>
  <string>      0%      0%      0%      0%!!!      1%!!! </string>
  <string>      z=-3      z=-1      z=-3      z=3!!!      z=3!!! </string>
  <string>      p=1!!!      p=1!!! </string>
  <string>3 - $20k to 30k      15      20      47      30      194!!! </string>
  <string>      0%      0%      0%      0%      0%!!! </string>
  <string>      0%      0%      0%      0%      1%!!! </string>
  <string>      z=-3      z=-2      z=-1      z=-0      z=3!!! </string>
  <string>      p=1!!! </string>
  <string>6 - Over $75k 25!!!      13!!!      42!!!      7      33 </string>
  <string>      0%!!!      0%!!!      0%!!!      0%      0% </string>
  <string>      0%!!!      0%!!!      0%!!!      0%      0% </string>
  <string>      z=4!!!      z=1!!!      z=5!!!      z=-1      z=-6 </string>
  <string>      p=1!!!      p=1!!!      p=1!!! </string>
```

Using the Example JSON Request

The quick way is to copy/paste a ready-to-go request.

- Scroll back up to the Request body
- Select and delete all the text
- Select and copy the JSON at the Appendix below
- Paste in as the request

Note that this is a different table specification.

A serialized `GenTabRequest` provided in the request body.

```
{
  "name": "Report-1",
  "top": "age",
  "side": "region",
  "filter": null,
  "weight": null,
  "sProps": {
    "caseFilter": null,
    "initAsMissing": true,
    "excludeNE": true,
    "padHierarchics": true,
```

- Execute

- Scroll a long way down

Should appear as

```

Response body
<ArrayOfString xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <string>Name: Report-1</string>
  <string>Top: age</string>
  <string>Side: region</string>
  <string>
    15-25    26-35    36-50    51-65    65+      Under 35    Over 35    Under 50    Over 50</string>
  <string>NE    479      498      501      504      540      977.00    1545.00    1478.00    1044.00</string>
  <string>SE    459      441      510      514      535      900.00    1559.00    1410.00    1049.00</string>
  <string>SW    523      467      457      517      511      990.00    1485.00    1447.00    1028.00</string>
  <string>NW    469      510      542      499      524      979.00    1565.00    1521.00    1023.00</string>
  <string>East  938      939      1011     1018     1075     1877.00   3104.00   2888.00   2093.00</string>
  <string>West  992      977      999      1016     1035     1969.00   3050.00   2968.00   2051.00</string>
  <string>North 948      1008     1043     1003     1064     1956.00   3110.00   2999.00   2067.00</string>
  <string>South 982      908      967      1031     1046     1890.00   3044.00   2857.00   2077.00</string>
</ArrayOfString>

```

TESTING OTHER ENDPOINTS

With the job open, many other endpoints will work immediately, for example, executing Dashboard List

Dashboard

GET /dashboard/list/{cust}/{job} Lists dashboards for a customer and job.

Parameters

Name	Description
cust * required string (path)	Customer name.
job * required string (path)	Job name.

client1rcs

demo

Execute

delivers a list of all dashboards (as XLSX files) in the job:

Response body

```
[
  {
    "name": "BigColsTest.xlsx",
    "createdUtc": "2021-09-02T01:37:57",
    "modifiedUtc": "2021-09-02T01:54:14",
    "length": 23236,
    "contentType": "application/vnd.openxmlformats-officeredocument",
    "hash": "6cb39035-583e-b1f2-d357-b886aa9baab4",
    "buffer": null,
    "customerName": "client1rcs",
    "jobName": "demo",
    "displayName": null,
    "userName": "RolandG",
    "isShared": false,
    "comment": "Imported by Cadmium"
  },
  {
    "name": "Book2.xlsx",
    "createdUtc": "2023-04-19T09:53:01",
    "modifiedUtc": "2023-04-19T09:53:01",
    "length": 50438,
    "contentType": "application/vnd.openxmlformats-officeredocument"
  }
]
```

APPENDIX: JSON TABLE SPECIFICATION

```
{
  "name": "Report-1",
  "top": "age",
  "side": "region",
  "filter": null,
  "weight": null,
  "sProps": {
    "caseFilter": null,
    "initAsMissing": true,
    "excludeNE": true,
    "padHierarchics": true,
    "arithOverStats": true,
    "topInsert": null,
    "sideInsert": null,
    "level": null
  },
  "dProps": {
    "titles": {
      "name": {
        "visible": true,
        "font": {
          "name": "Arial",
          "size": 10,
          "style": 0,
          "hAlign": 0,
          "vAlign": 0,
          "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
          }
        },
        "back": {
          "r": 255,
          "g": 255,
          "b": 255,
          "a": 255
        }
      }
    }
  }
}
```

```

        "wordwrap": false
    }
},
"top": {
    "visible": true,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
    },
    "back": {
        "r": 255,
        "g": 255,
        "b": 255,
        "a": 255
    },
    "wordwrap": false
}
},
"side": {
    "visible": true,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
    },
    "back": {
        "r": 255,
        "g": 255,
        "b": 255,
        "a": 255
    },
    "wordwrap": false
}
},
"filter": {
    "visible": false,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
    },
    "back": {
        "r": 255,

```

```

        "g": 255,
        "b": 255,
        "a": 255
    },
    "wordwrap": false
}
},
"weight": {
    "visible": false,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
        "back": {
            "r": 255,
            "g": 255,
            "b": 255,
            "a": 255
        },
    },
    "wordwrap": false
}
},
"status": {
    "visible": false,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
        "back": {
            "r": 255,
            "g": 255,
            "b": 255,
            "a": 255
        },
    },
    "wordwrap": false
}
},
"labelling": {
    "script": false,
    "codes": false,
    "name": false,
    "desc": false
}
},
"columns": {
    "groups": {
        "size": 30,
        "labelling": {
            "name": false,

```

```

    "desc": true
  },
  "visible": true,
  "font": {
    "name": "Arial",
    "size": 10,
    "style": 0,
    "hAlign": 1,
    "vAlign": 1,
    "color": {
      "r": 0,
      "g": 0,
      "b": 0,
      "a": 255
    },
    "back": {
      "r": 255,
      "g": 255,
      "b": 255,
      "a": 255
    },
  },
  "wordwrap": false
}
},
"labels": {
  "width": 74,
  "height": 67,
  "labelling": {
    "name": false,
    "desc": true
  },
  "visible": true,
  "font": {
    "name": "Arial",
    "size": 10,
    "style": 0,
    "hAlign": 1,
    "vAlign": 0,
    "color": {
      "r": 0,
      "g": 0,
      "b": 0,
      "a": 255
    },
    "back": {
      "r": 255,
      "g": 255,
      "b": 255,
      "a": 255
    },
  },
  "wordwrap": false
}
},
"letters": {
  "font": {
    "name": "Arial",
    "size": 10,
    "style": 0,
    "hAlign": 1,
    "vAlign": 1,
    "color": {
      "r": 0,
      "g": 0,
      "b": 0,
      "a": 255
    }
  }
}

```

```

    },
    "back": {
        "r": 255,
        "g": 255,
        "b": 255,
        "a": 255
    },
    "wordwrap": false
}
},
"sort": {
    "active": false,
    "increasing": false,
    "ungrouped": false,
    "band": 0,
    "type": 0,
    "key": 0
},
"hide": {
    "active": false,
    "missing": false,
    "empty": false
}
},
"rows": {
    "groups": {
        "size": 23,
        "labelling": {
            "name": false,
            "desc": true
        },
    },
    "visible": true,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
    },
    "back": {
        "r": 255,
        "g": 255,
        "b": 255,
        "a": 255
    },
    "wordwrap": false
}
},
"labels": {
    "width": 81,
    "height": 20,
    "labelling": {
        "name": false,
        "desc": true
    },
    "visible": true,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,

```

```

    "hAlign": 0,
    "vAlign": 0,
    "color": {
      "r": 0,
      "g": 0,
      "b": 0,
      "a": 255
    },
    "back": {
      "r": 255,
      "g": 255,
      "b": 255,
      "a": 255
    },
    "wordwrap": false
  }
},
"letters": {
  "font": {
    "name": "Arial",
    "size": 10,
    "style": 0,
    "hAlign": 0,
    "vAlign": 0,
    "color": {
      "r": 0,
      "g": 0,
      "b": 0,
      "a": 255
    },
    "back": {
      "r": 255,
      "g": 255,
      "b": 255,
      "a": 255
    },
    "wordwrap": false
  }
},
"sort": {
  "active": false,
  "increasing": false,
  "ungrouped": false,
  "band": 0,
  "type": 0,
  "key": 0
},
"hide": {
  "active": false,
  "missing": false,
  "empty": false
}
},
"cells": {
  "key": {
    "font": {
      "name": "Arial",
      "size": 10,
      "style": 0,
      "hAlign": 0,
      "vAlign": 0,
      "color": {
        "r": 0,
        "g": 0,
        "b": 0,

```

```

        "a": 255
    },
    "back": {
        "r": 255,
        "g": 255,
        "b": 255,
        "a": 255
    },
    "wordwrap": false
}
},
"bases": {
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
    },
    "back": {
        "r": 255,
        "g": 255,
        "b": 225,
        "a": 255
    },
    "wordwrap": false
}
},
"frequencies": {
    "visible": true,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
    },
    "back": {
        "r": 255,
        "g": 255,
        "b": 255,
        "a": 255
    },
    "wordwrap": false
}
},
"columnPercents": {
    "visible": false,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {

```



```

        "r": 0,
        "g": 0,
        "b": 0,
        "a": 255
    },
    "back": {
        "r": 206,
        "g": 255,
        "b": 255,
        "a": 255
    },
    "wordwrap": false
}
},
"rowPercents": {
    "visible": false,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
        "back": {
            "r": 255,
            "g": 242,
            "b": 242,
            "a": 255
        },
        "wordwrap": false
    }
},
"stat1": {
    "visible": false,
    "font": {
        "name": "Arial",
        "size": 10,
        "style": 0,
        "hAlign": 0,
        "vAlign": 0,
        "color": {
            "r": 0,
            "g": 0,
            "b": 0,
            "a": 255
        },
        "back": {
            "r": 255,
            "g": 255,
            "b": 255,
            "a": 255
        },
        "wordwrap": false
    }
},
"stat2": {
    "visible": false,
    "font": {
        "name": "Arial",
        "size": 10,

```

```

    "style": 0,
    "hAlign": 0,
    "vAlign": 0,
    "color": {
      "r": 0,
      "g": 0,
      "b": 0,
      "a": 255
    },
    "back": {
      "r": 255,
      "g": 255,
      "b": 255,
      "a": 255
    },
    "wordwrap": false
  },
  "percentSign": {
    "visible": true
  },
  "missingAsZero": false,
  "missingAsBlank": false,
  "zeroAsBlank": false,
  "blankAsChar": false,
  "blankChar": "-",
  "percentsAsProportions": false,
  "showRedundant100": false
},
"significance": {
  "visible": false,
  "type": 0,
  "propStat": 0,
  "meanStat": 0,
  "statsParam": null,
  "letterSequence": null,
  "letters": 0,
  "appendLetters": false,
  "headcount": 0,
  "meanPoolVariance": false,
  "propPooledEst": false,
  "continuityCorr": false,
  "skipBase30": true,
  "skipCell15": true,
  "letters64": false,
  "oneTailed": false,
  "sigLevel1": {
    "threshold": 95,
    "font": {
      "name": "Arial",
      "size": 10,
      "style": 0,
      "hAlign": 0,
      "vAlign": 0,
      "color": {
        "r": 255,
        "g": 0,
        "b": 0,
        "a": 255
      },
    },
    "back": {
      "r": 255,
      "g": 255,
      "b": 255,
      "a": 255
    }
  }
}

```

```

    },
    "wordwrap": false
  }
},
"sigLevel2": {
  "threshold": 90,
  "font": {
    "name": "Arial",
    "size": 10,
    "style": 0,
    "hAlign": 0,
    "vAlign": 0,
    "color": {
      "r": 0,
      "g": 0,
      "b": 255,
      "a": 255
    },
    "back": {
      "r": 255,
      "g": 255,
      "b": 255,
      "a": 255
    },
  },
  "wordwrap": false
}
},
"sigLevel3": {
  "threshold": 80,
  "font": {
    "name": "Arial",
    "size": 10,
    "style": 0,
    "hAlign": 0,
    "vAlign": 0,
    "color": {
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  },
  "wordwrap": false
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}
},
"decimals": {
  "frequencies": 0,
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"output": {
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```