



# EMBARCADERO CONFERENCE ONLINE

**Código, código e mais código**  
**Conectando pessoas através do desenvolvimento**



# EMBARCADERO CONFERENCE ONLINE

**API Layer, seus recursos e  
conexão usando REST**

por Victory Fernandes

## Victory Fernandes

**Amo Delphi desde 1998! :)**

Engenheiro Eletricista (Unifacs-2003)

Pós Graduado em Docência do Ensino Superior (Unifacs-2010)

Mestrado em Medicina-Neurociências (UFBa-2014)

# RestFull API

**REST - *Representational state transfer*** é uma arquitetura de software com 6 requisitos fundamentais!

**Client/Server:** interface do usuário separada do armazenamento de dados para melhor portabilidade e escalabilidade.

**Stateless:** Solicitação do cliente deve conter todas as informações necessárias e não pode tirar proveito de nenhum contexto armazenado no servidor. O estado da sessão é, portanto, mantido inteiramente no cliente.

**Cacheable:** Resposta a uma solicitação são rotuladas como armazenáveis ou não armazenáveis em cache. Se uma resposta puder ser armazenada em cache, o cache do cliente terá o direito de reutilizar os dados de resposta para solicitações equivalentes posteriores.

**Uniform interface:** São quatro as restrições de interface: identificação de recursos; manipulação de recursos por meio de representações; mensagens autodescritivas; e, hipermídia como o motor de estado do aplicativo.

**Layered system:** Camadas hierárquicas, restringem o comportamento do componente de forma que cada componente não possa "ver" além da camada imediata com a qual estão interagindo.

**Code on demand (opcional):** Cliente pode baixar e executar código na forma de miniaplicativos ou scripts. Isso simplifica os clientes, reduzindo o número de recursos necessários para serem pré-implementados.



# API - *Application Programming Interface*





# APILayer.com



## ipstack

IP address intelligence API  
and geolocation lookup



## userstack

User-Agent lookup and  
device detection API



## aviationstack

Real-time and historical flight  
tracking & status API



## weatherstack

Real-time world weather  
data & forecasts API



## positionstack

Forward and reverse batch  
geocoding & maps API



## ipapi

IP address location &  
Reverse IP Lookup API



## marketstack

Real-time, intraday &  
historical stock data API



## mediastack

Live News, Headlines & Blog  
Articles JSON API



## languagestack

Language detection API for  
173 world languages



## serpstack

Real-Time Google Search &  
SERP API



## countrylayer

Detailed information about  
countries from all over the  
world



# APILayer.com



## currencylayer

Reliable currency conversion API for 168 world currencies



## coinlayer

Crypto currency exchange rates & conversion API



## screenshotlayer

Queueless URL to PNG screenshot conversion API.



## pdfplayer

Powerful HTML or URL to PDF conversion API.



## Fixer

Foreign exchange rates & currency conversion API



## exchangeratesapi

REST API interface delivering worldwide stock market data



## scrapestack

Real-Time Proxy & Web Scraping API



## vatlayer

EU VAT number validation & EU VAT rates lookup API



## mailboxlayer

SMTP-based email address validation & verification API



## numverify

International phone number validation API




# WeatherStack.com

Quickstart

weatherstack.com/quickstart

Apps Maps Traduzir Mestrado PPgMS iOS Compiler The TIndex - Delphi... David I's Embarcad... HORARIOS - Mallor... Os

 weatherstack

Control Panel - 3-Step Quickstart Guide

Logged In as Victory Santos Fernandes ([Sign Out](#))

Dashboard

[Upgrade](#)

Subscription Plan

Account

Payment

API Usage

Other APIs

Sign Out

### 3-Step Quickstart Guide

Welcome to the **weatherstack** API, Victory Santos!  
This guide should get you started in a matter of seconds - let's dive right in:

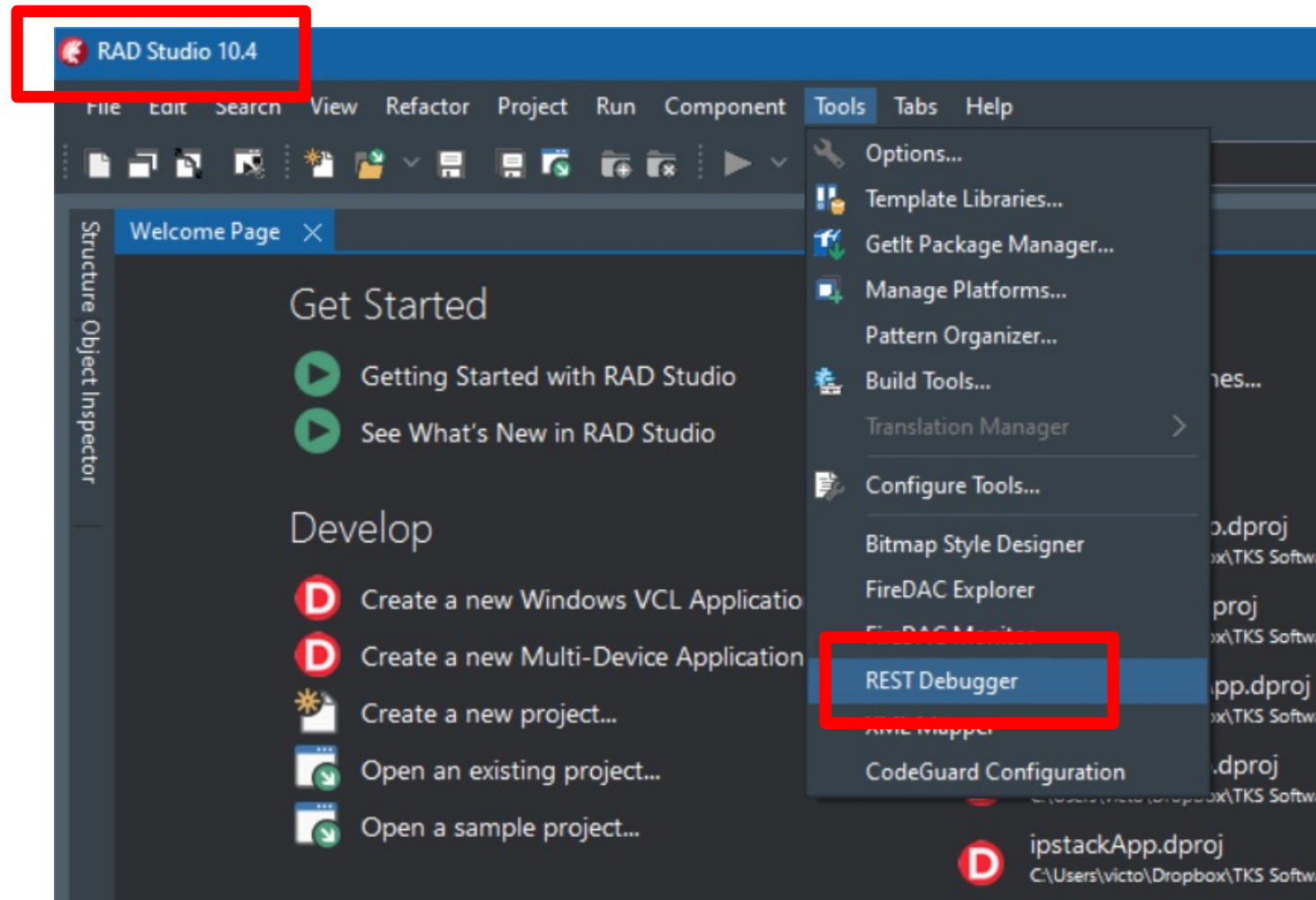
#### Step 1: Your API Access Key

This is your **API Access Key**, your personal key required to authenticate with the API.  
Keep it safe! You can reset it at any time in your [Account Dashboard](#).


136311a9816fd9902afd90d391811f82



# REST Debugger



# REST Debugger

 RESTDebugger



REST Debugger 10.4.2  
Embarcadero Technologies

## Request

Request Parameters Authentication Connection

Method: URL:  
GET  http://api.weatherstack.com/current

Content-Type:

application/json

Custom body:

# REST Debugger

RESTDebugger

REST Debugger 10.4.2  
Embarcadero Technologies

**Request**

Request Parameters Authentication Connection

Resource:

Request Parameters:

- [GET/POST / E] access\_key=136311a9816fd9902afd90d391811f82
- [GET/POST / E] query=Salvador

Add Edit Delete

New Request Load Request Save Request Copy Components

**Response**

http://api.weatherstack.com/current?access\_key=136311a9816fd9902afd90d391811f82&query=Salvador  
200 : OK - 688 bytes of data returned. Timing: Pre: 0ms - Exec: 359ms - Post: 0ms - Total: 359ms

Headers Body Tabular Data

Content is valid JSON

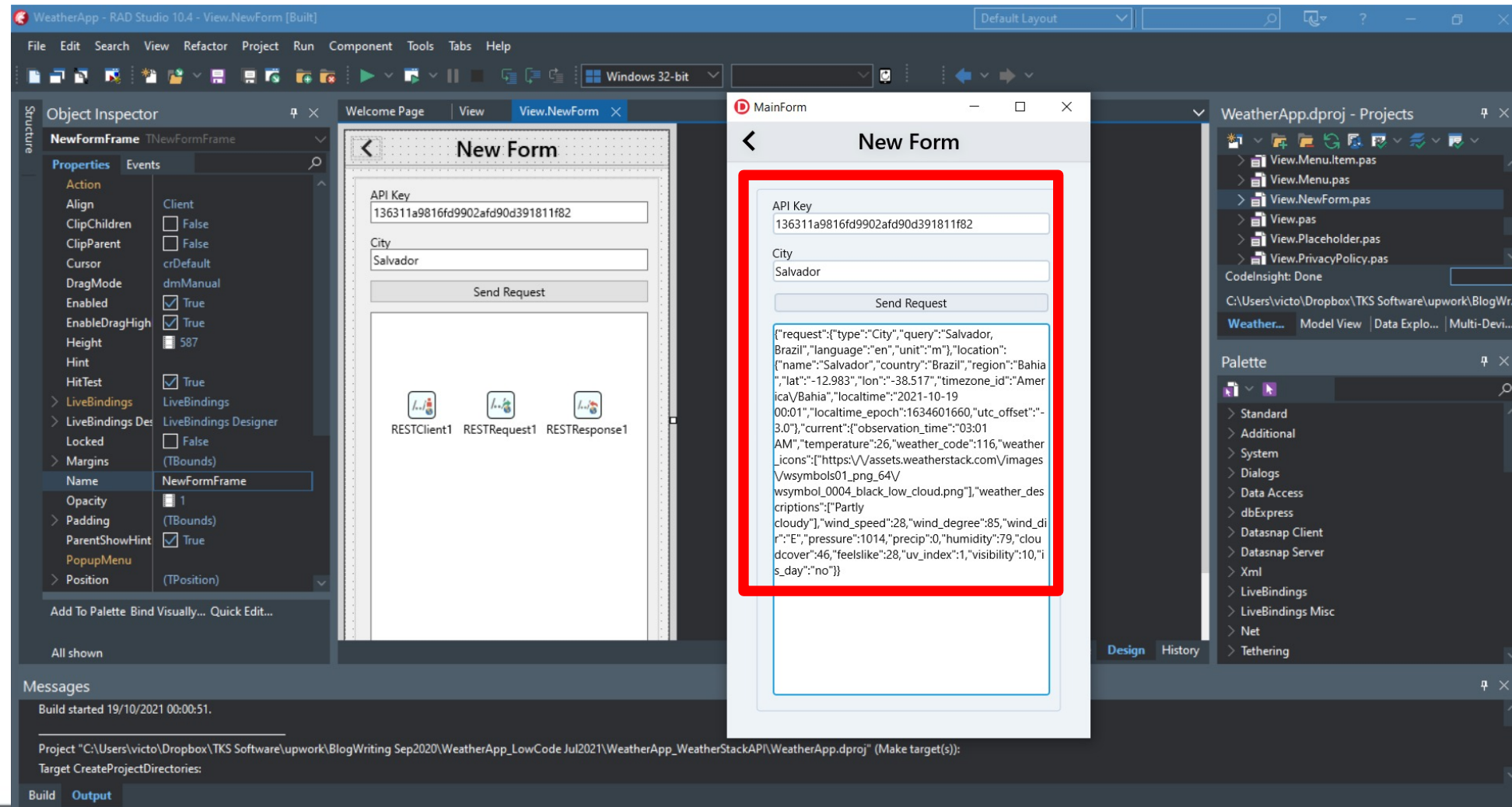
JSON Root Element:

```
{
  "request": {
    "type": "City",
    "query": "Salvador, Brazil",
    "language": "en",
    "unit": "m"
  },
  "location": {
    "name": "Salvador",
    "country": "Brazil"
  }
}
```

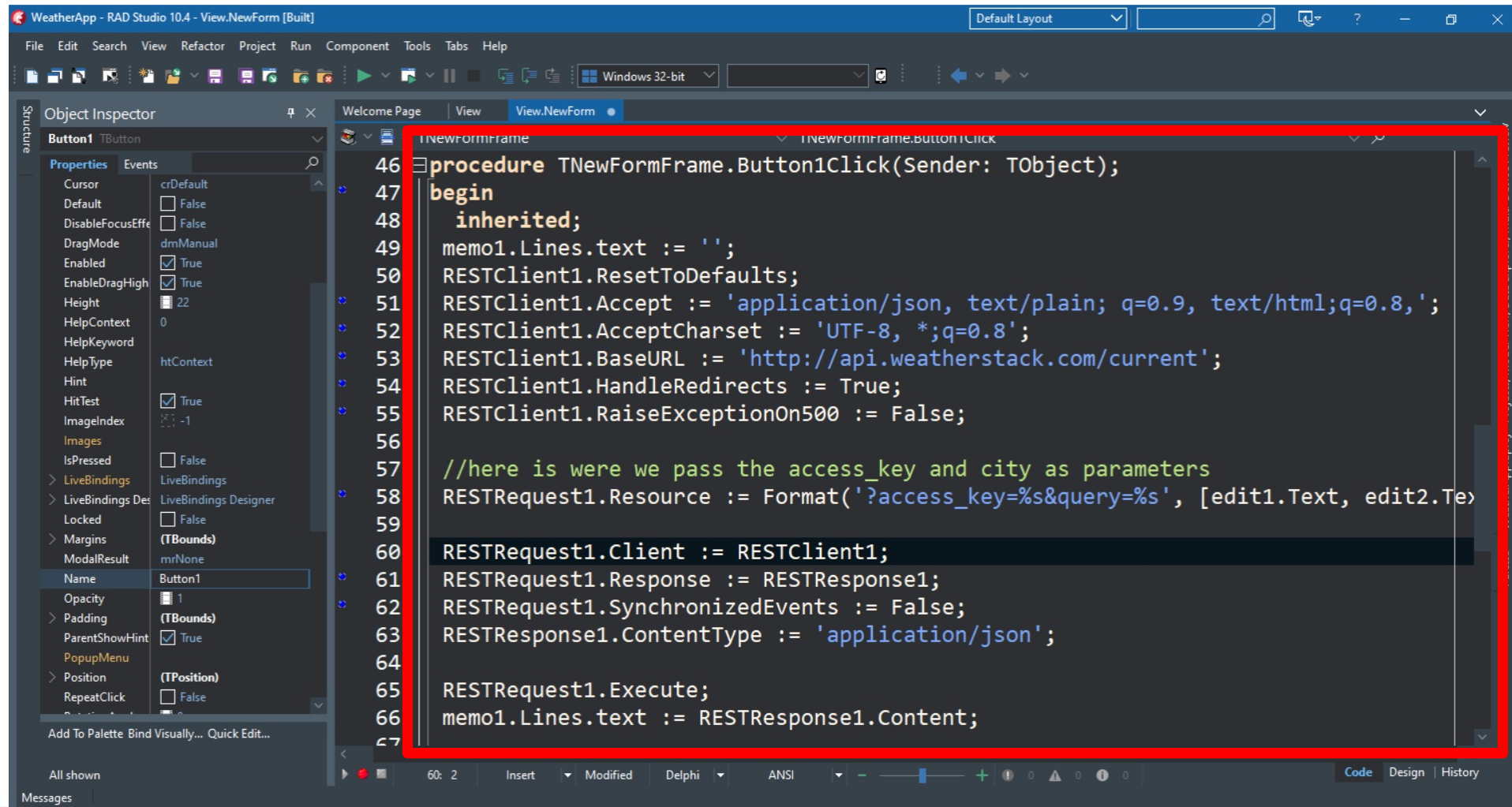
Proxy-server disabled



# RAD Studio - Delphi



# RAD Studio - Delphi





<https://blogs.embarcadero.com/author/vicfernandes/>

Everything You Need For An Awesome Low Code Weather App

By Victory Fernandes - July 15, 2021

Join Our Global Developer Community

Join our email list and receive the latest case studies, event updates, product news, and much more.

Enter your email

SIGN UP





# ExchangeRatesAPI

Automate Access To Current And Historical Currency Exchange Rates Via API

blogs.embarcadero.com/automate-access-to-current-and-historical-currency-exchange-rates-via-api/

Embarcadero Blogs 0 + New AMP

Home News Showcase Community

Facebook Twitter YouTube LinkedIn

Exchange Rates

USD

	Symbol	CurrencyValue
United States Dollar	USD	1.00
Uruguayan Peso	UYU	44.21
Uzbekistan Som	UZS	10506.00
Venezuelan Bolívar Fuerte	VEF	213830222338.07
Vietnamese Dong	VND	23079.00
Vanuatu Vatu	VUV	109.54
Samoan Tala	WST	2.53
CFA Franc BEAC	XAF	548.76
Silver (troy ounce)	XAG	0.04
Gold (troy ounce)	XAU	0.00
East Caribbean Dollar	XCD	2.70
Special Drawing Rights	XDR	0.70
CFA Franc BCEAO	XOF	551.50
CFP Franc	XPF	100.15
Yemeni Rial	YER	250.35
South African Rand		
Zambian Kwacha (pre-2013)		
Zambian Kwacha		
Zimbabwean Dollar		

1 USD = 44.21 UYU

ios json learn delphi programming language

learn object pascal linux macos

MiTeC System Information Management Suite

object pascal Productivity

programming Python

python4delphi python gui rad server

rad studio rest rest api

showcase stories vcl

windows

Toggle Reader Mode


Newest questions tagged delphi – Stack Overflow

Quickly Build Powerful Native C++





blogs.embarcadero.com/quickly-build-powerful-native-cryptocurrency-charting-solutions-for-windows/


Apps LearnDelphi.tv Gmail YouTube Maps Traduzir Mestrado PPGMS iOS Compiler The Tindex - Delphi... David I's Embarcad... HORARIOS - Mallor... Osteopatía Estructu... Lista de leitura

Embarcadero Blogs 0 New AMP Howdy, Victory Fernandes



Home News Showcase Community





Adjusting for cryptocurrency variations on the example VCL chart

Ethereum (ETH) values are significantly smaller than BitCoin (BTC). To improve the scaling and provide a better comparison let's expand "ETH" to a full chart size. Let us give ETH a separate axis on the right side:

Series1  
Series2

Chart  
Data  
Export  
Print

Series2

Format Point General Marks Data Source

Options Legend Hover

General:  
Cursor: Default  
Depth: 0 ☒ Auto

Formats:  
Values: #,##0,###  
Percents: ##0,## %

☒ Show in this editor

Horizontal Axis:  
Bottom  
☒ DateTime

Vertical Axis:  
Right

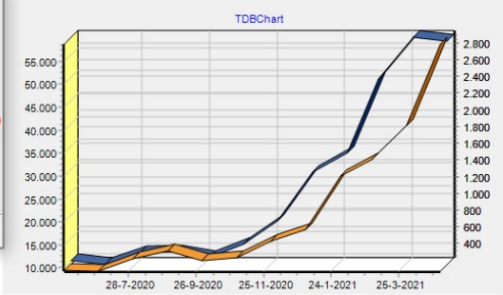
☐ DateTime

Sort:  
X

Upgrade to Pro version with 100% source code!

ations (TChartAnimations)  
Refresh ☒ True

TDBChart



How to fetch live cryptocurrency data into our VCL chart example

Load from file Save to file

Fill from network  
url: https://api.coingecko.com/api/v3/coins/bitcoin/market\_data?localization=...&include\_market\_data=...&include\_ohlc\_data=...

English  
Deutsch  
Español  
Français  
Português  
Русский  
日本語

Newest questions tagged  
c++builder – Stack Overflow

Change the order of rows in TGridPanel by  
button click

Getting back into old XE5 C++Builder platform

\_\_func\_\_ returns class name in debug but not  
in release





EMBARCADERO  
CONFERENCE ONLINE

# DÚVIDAS PERGUNTAS







victoryfernandes@yahoo.com.br



victoryfernandes



@victoryjorge

**EMBARCADERO  
CONFERENCE ONLINE**

**OBRIGADO**





# EMBARCADERO CONFERENCE ONLINE

**Código, código e mais código**  
**Conectando pessoas através do desenvolvimento**