

Firestore Cloud Messaging

Firestore Cloud Messaging HTTP v1 client — send Android, iOS and web push from Delphi using OAuth 2.0 service-account credentials.

Overview

Firebase Cloud Messaging (FCM) is a cross-platform messaging solution that lets you reliably send messages at no cost.

At a glance

COMPONENT CLASS

`TsgcHTTPGoogleCloud_FCM_Client`

STANDARDS / SPEC

Firebase Cloud Messaging

TRANSPORTS

TCP, TLS

PLATFORMS

Windows, macOS, Linux, iOS, Android

FRAMEWORKS

VCL, FireMonkey, Lazarus / FPC

EDITION

Standard / Professional / Enterprise

Features

- Native Delphi implementation with full ANSI/Unicode support.

Technical specification

Standards & specs	Firebase Cloud Messaging · FCM HTTP v1 API reference
Component class	<code>TsgcHTTPGoogleCloud_FCM_Client</code> (unit <code>sgcHTTP_GoogleCloud_FCM_Client</code>)
Frameworks	VCL, FireMonkey, Lazarus / FPC
Platforms	Windows, macOS, Linux, iOS, Android

Main properties

The principal published / public properties used to configure and drive the component. Consult the online help for the full list.

<code>TLSOptions</code>	Published or public property used to configure or query the component.
<code>OnAuthToken</code>	Published or public property used to configure or query the component.
<code>OnAuthTokenError</code>	Published or public property used to configure or query the component.
<code>GoogleCloudOptions</code>	Published or public property used to configure or query the component.
<code>LogFile</code>	Published or public property used to configure or query the component.
<code>Version</code>	Published or public property used to configure or query the component.

Main methods

The principal public methods exposed by the component.

<code>LoadSettingsFromFile()</code>	Public procedure exposed by the component.
<code>RefreshToken()</code>	Public function exposed by the component.
<code>Clear()</code>	Public procedure exposed by the component.

Quick Start

Drop the component on a form, configure the properties below and activate it. The snippet that follows shows the typical **Authorization** configuration sourced from the online help.

About this scenario. Google FCM component client can login to Google Servers using the following methods:

Delphi (VCL / FireMonkey)

```
oFCM := TsgcHTTPGoogleCloud_FCM_Client.Create(nil);
oFCM.TLSOptions.IOHandler := iohOpenSSL;
oFCM.TLSOptions.Version := tls1_3;
oFCM.TLSOptions.VerifyCertificate := True;
oFCM.TLSOptions.OpenSSL_Options.LibPath := oslpDefaultFolder;
```

C++ Builder

```
TsgcHTTPGoogleCloud_FCM_Client *oFCM = new TsgcHTTPGoogleCloud_FCM_Client(NULL);
oFCM->TLSOptions->IOHandler = iohOpenSSL;
oFCM->TLSOptions->Version = tls1_3;
oFCM->TLSOptions->VerifyCertificate = true;
oFCM->TLSOptions->OpenSSL_Options->LibPath = oslpDefaultFolder;
```

.NET (C#)

```
oFCM = new TsgcHTTPGoogleCloud_FCM_Client();
oFCM.TLSOptions.IOHandler = TwstlsIOHandler.iohOpenSSL;
oFCM.TLSOptions.Version = TwstlsVersions.tls1_3;
oFCM.TLSOptions.VerifyCertificate = true;
oFCM.TLSOptions.OpenSSL_Options.LibPath = oslpDefaultFolder;
```

Common scenarios

The following scenarios are lifted verbatim from the online help. Each shows the configuration and method calls needed to drive the component through a specific real-world flow.

1 · Google FCM Client

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Delphi (VCL / FireMonkey)

```
oFCM:= TsgcHTTPGoogleCloud_FCM_Client.Create(nil);
oFCM.GoogleCloudOptions.Authorization := gca0Auth2;
oFCM.GoogleCloudOptions.OAuth2.ClientId := '... your google client id...';
oFCM.GoogleCloudOptions.OAuth2.ClientSecret := '... your google client secret...';
```

C++ Builder

```
oFCM = new TsgcHTTPGoogleCloud_FCM_Client();
oFCM->GoogleCloudOptions->Authorization = gca0Auth2;
oFCM->GoogleCloudOptions->OAuth2->ClientId = "... your google client id...";
oFCM->GoogleCloudOptions->OAuth2->ClientSecret = "... your google client secret...";
```

.NET (C#)

```
oFCM = new TsgcHTTPGoogleCloud_FCM_Client();
oFCM.GoogleCloudOptions.Authorization = gca0Auth2;
oFCM.GoogleCloudOptions.OAuth2.ClientId = "... your google client id...";
oFCM.GoogleCloudOptions.OAuth2.ClientSecret = "... your google client secret...";
```

Sources used to build this document

Every external claim links back to a primary source. The online-help references decode the canonical deep-link the company maintains for this component.

Primary standard / spec — Firebase Cloud Messaging	firebase.google.com/docs/cloud-messaging
Primary standard / spec — FCM HTTP v1 API reference	firebase.google.com/docs/reference/fcm/rest/v1/projects.messages
Online help — component page	www.esegece.com/help/sgcWebSockets/Components/HTTP/Google/FCM/Google_Cloud_FCM.htm
Delphi demo project (in the sgcWebSockets package)	Demos\20.HTTP_Protocol\03.Google\03.Google_FCM
Component page	www.esegece.com/products/websockets/http/google-fcm/
Product page	www.esegece.com/products/websockets/

Document scope. This document covers the publicly-documented surface of the Firebase Cloud Messaging component shipped with sgcWebSockets. For full property, method and event reference consult the online help linked above.