[RSP-17857] Android service applications crash if FMX.Types unit is included Created: 14/Apr/17 Updated: 22/Feb/19

Status:	Open
Project:	RAD Studio
Component/s:	FireMonkey
Affects Version/s:	10.2 Tokyo
Fix Version/s:	None

Type:	Bug	**Priority:**	Major
Reporter:	Dave Nottage	**Assignee:**	Internal Dev
Resolution:	Unresolved	**Votes:**	15
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original Estimate:	Not Specified		

Attachments:	📄 RSP-17857.zip			
Issue Links:	**Relates**			
	relates to	RSP-11831	Android Service Application Timers no...	Open
Build No:	25.0.26309.314			
Platform:	Android			
Language Version:	English			
Edition:	Architect			

Steps:	1. Load the attached project group
	2. Do a Build All
	3. Run the app
	Expected: The app and service runs without error
	Actual: The service crashes with the following message:
	
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	Debugger Exception Notification
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	Project AndroidServiceHost.apk raised exception class Segmentation fault (11).
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	Break Continue Help
	---------------------------- 	
	
	This is the point in the code where it crashes:
	
	<pre>procedure TPlatformAndroid.BindAppGlueEvents;
	var
	  AndroidAppGlue: TAndroidApplicationGlue;
	begin
	  AndroidAppGlue := PANativeActivity(System.DelphiActivity)^.instance; // <------- Error occurs here
	  AndroidAppGlue.OnApplicationCommandEvent := HandleApplicationCommandEvent;
	  AndroidAppGlue.OnContentRectEvent := HandleContentRectChanged;
	  AndroidAppGlue.OnInputEvent := HandleAndroidInputEvent;
	end;</pre>			

InternalID:	RS-83592			
InternalStatus:	Open			
InternalTrackingLink:	http://vmsfjira:8665/browse/RS-83592			

Description

As per the summary, if the FMX.Types unit is included in an Android service, the service crashes.

Comments

Comment by Markus Humm [15/Apr/17]

If only including but not properly using anything from it in the service leads to these crashes the crashing code should be found in the initialization section of that unit, correct? Does it have one and if yes what does it do? If no things get even stranger...

Comment by Detlef Schweng [16/Apr/17]

It seems the variable DelphiActivity is not initialized in System.pas. I tried to verify that, but I can't compile system.pas, because the file 'ex.android.arm.inc' is missing.

Comment by Markus Humm [17/Apr/17]

Having no Delphi at hand right now I'm curious about the meaning of this DelphiActivity variable.

Comment by Detlef Schweng [17/Apr/17]

I found out today, that the DelphiActivity variable is correctly set to nil in the service. In the host application it references to the main activity.
Because this variable is set to nil, the service crashes as soon as you include this unit into the service. So, you can't use any of the FMX components (like TTimer...) in the Android service.

Comment by Remy Lebeau (TeamB) [24/Aug/17]

Related issues: RSP-12199 and RSP-13381. FMX seems to have a lot of problems related to use of System.DelphiActivity in a service. And for good reason. DelphiActivity probably shouldn't exist in the first place! You are not supposed to hold on to references to the Activity object in the first place. And a Service doesn't even require an Activity to run! Apps and Services alike run as Contexts instead (the `Activity` and `Service` classes both derive from the `Context` class), so if you need to hold a reference to something, hold one to the Context that the code is running in (which FMX also does). What is FMX doing with DelphiActivity that is so important that it can't be done in other (safer) ways?

Comment by Delphi Developer [10/Oct/17]

This issue needs to be solved, Android Services are useless without Firedac connection.

Comment by Dave Nottage [16/Oct/17]

As long as you do not include any of the FireDAC.FMXxxx units, FireDAC should work in a service. Be sure to change the ClassGroup property of any DataModules to System.Classes.TPersistent, and remove any FireDAC.FMXxxx units

Comment by Daniel Mazur [22/Feb/19]

It's February 2019 and this issue is still not resolved
Good job Embarcadero