GCP Logs & Traces

Context : https://github.com/googleapis/google-cloud-dotnet/issues/9868

Summary :

When using AddGoogleDiagnosticsForAspNetCore with CloudRun and BufferOptions.NoBuffer(), it causes a big latency However, with CloudRun, this settings seems required

Process :

Create a simple app where we can just change log and trace buffer options with env var Deploy on CloudRun

Results :

NoBuffer / NoBuffer

2 requests sent from browser 2 traces correctly working Huge latency

>	i	2023-03-03 10:14:29.5	507 CET	GET	200		823 B	591	l ms	Ŧ	Chrome	110.0	https://apps-dev	.groupebarriere.	com/test-a	pi/system
>	i	2023-03-03 10:14:07.6	531 CET	GET	200		824 B	519) ms	Ŧ	Chrome	110.0	https://apps-dev	.groupebarriere.	com/test-a	pi/system
<	Trac	e details														
	Show I	Logs COLLAPSE ALL														
<u>~</u> :	Show	0				250							500			750
2	Show I	•	ns)			250							500		3	750
	Show	0		system (279.48	ms)	250							500			750
	Show	0	/test-api/s	ystem (279.48	1		Aethod: GET S	Scheme: I	nttp Pati	hBase: /			500	-	;	750
	Show	0	/test-api/s		1	TTP/1.1 M	Method: GET S		nttp Pati	hBase: /			500	-		750
	Show	0	/test-api/s		1	TTP/1.1 M						nt":"Developme	500			750

After each log, we have "white" => this is the time needed to upload log/trace Around 100ms for each "white"

Timed0 / Timed0 (which means 10ms timedbuffer for both logs and traces) 3 requests sent from browser (ignoring 1st request response time because of cold start) 2 traces correctly working, the 1st and the 3rd (2nd one only has logs but no trace ...) No Latency

>	i	2023-03-03 10:26:54.055 CET	GET	200	819 B	19 ms 🚖	Chrome 110.0 https://apps-dev.groupebarriere.com/test-api/system
>	i	2023-03-03 10:26:51.100 CET	GET	200	817 B	5 ms 🚖	Chrome 110.0 https://apps-dev.groupebarriere.com/test-api/system
>	i	2023-03-03 10:26:44.482 CET	GET	200	877 B	3 s 🔁	Chrome 110.0 https://apps-dev.groupebarriere.com/test-api/system
				-			
>	(i)	2023-03-03 10:26:54.055 CET	GET	200	010.0	19 ms 😤	Object 110.0 https://www.dou.com/bonies.com/bont.org/
		2023-03-03 10.20.34.035 GET	GET	200	819 B	19 ms =	Chrome 110.0 https://apps-dev.groupebarriere.com/test-api/system
>	(i)	2023-03-03 10:26:51.100 CET		200	819 B 817 B	19 ms 문 5 ms 문	
>	i i						Chrome 110.0_) https://apps-dev.groupebarriere.com/test-api/system

Unable to explain what is going on here : if the 3rd request correctly has a trace, why the 2nd one does not

=> is this a thread throttling by CloudRun ? if yes, why the 3rd request correctly sent its logs / traces (should have also picked the previous trace, it is a buffer common to all requests ...)

× Trace detail	3			
Show Logs C	OLLAPSE ALL			
0	1	20) ()	0
∕ ~	/test-api/system (21.36 ms)			
	HTTP "GET https://apps-dev.groupebarriere.com/test-api/syste			
		/test-a	api/system (1 ms)	
		i R	equest: Protocol: HTTP/1.1 Method: GET Scheme: http PathBase: /	
			Respon	
			ResponseBody: ("environment":"Development","logMode":"T	
Ų.			i HTTP 'GET https://apps-dev.groupebarriere.com/test-api/sys	t

The "white" area is the load balancer part, but then we can see that there are no more latency between log statements

Timed0 / NoBuffer (which means 10ms timedbuffer for logs and no buffer for traces) 3 requests sent from browser (ignoring 1st request response time because of cold start) 0 trace working

>	i	2023-03-03 10:37:41.334 CET	GET	200	817 B	335 ms 3	Ŧ	Chrome 110.0 https://apps-dev.groupebarriere.com/test-api/system
>	i	2023-03-03 10:37:39.939 CET	GET	200	820 B	301 ms 3	ł	Chrome 110.0 https://apps-dev.groupebarriere.com/test-api/system
>	(i)	2023-03-03 10:37:36.708 CET	GET	200	880 B	3 s 😤	C	Chrome 110.0. https://apps-dev.groupebarriere.com/test-api/system

=> this was the recommendation from Google team to be sure to have traces, it does not work ...

Sized2 / Sized1 (which means 64Ko buffer for logs, 4Ko buffer for traces)

3 requests sent from browser (ignoring 1st request response time because of cold start) 0 trace working

Incomplete logs (i.e even after cloud run stops the service)

```
> i
2023-03-03 10:42:04.331 CET
GET
200
818 B
4 ms 毫
Chrome 110.0_ https://apps-dev.groupebarriere.com/test-api/system

> i
2023-03-03 10:42:02.719 CET
GET
200
818 B
6 ms 毫
Chrome 110.0_ https://apps-dev.groupebarriere.com/test-api/system

> i
2023-03-03 10:41:59.775 CET
GET
200
878 B
2 s 毫
Chrome 110.0_ https://apps-dev.groupebarriere.com/test-api/system
```

Logs in cloud run showing "Hosting stopped"

> (i	2023-03-03 10:42:04.331 CET	GET 200 818 B 4 ms Chrome 110 https://apps-dev.groupebarriere.com/test-api/system
> (i	2023-03-03 10:42:45.257 CET	Application is shutting down
> 🐞	2023-03-03 10:42:45.258 CET	Hosting stopping
> 🐞	2023-03-03 10:42:45.264 CET	Hosting stopped