

# Perform 2018

## Mobile Performance Management for Native Mobile Applications

Hands-on Training Instructions

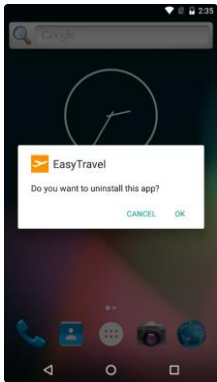
Bonus – Connect the Android App to Dynatrace AppMon





## Preparation – Uninstall the easyTravel app

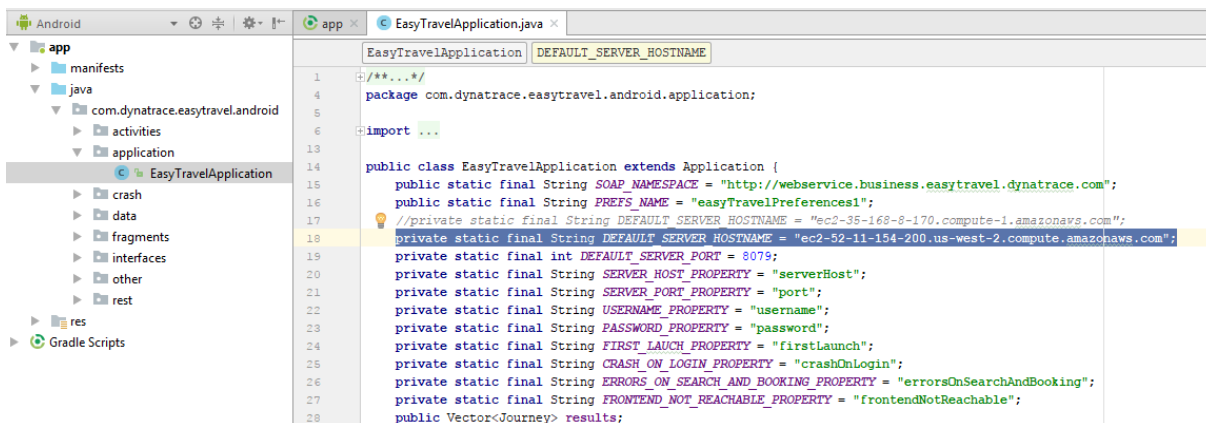
Uninstall the app in your emulator to ensure that it will start up with the new settings, the next time it is started.



## Connect the app to the AppMon environment

1. Find the EasyTravelApplication class in Android Studio and change the DEFAULT\_SERVER\_HOSTNAME constant to the easyTravel that is connected to our AppMon instance.

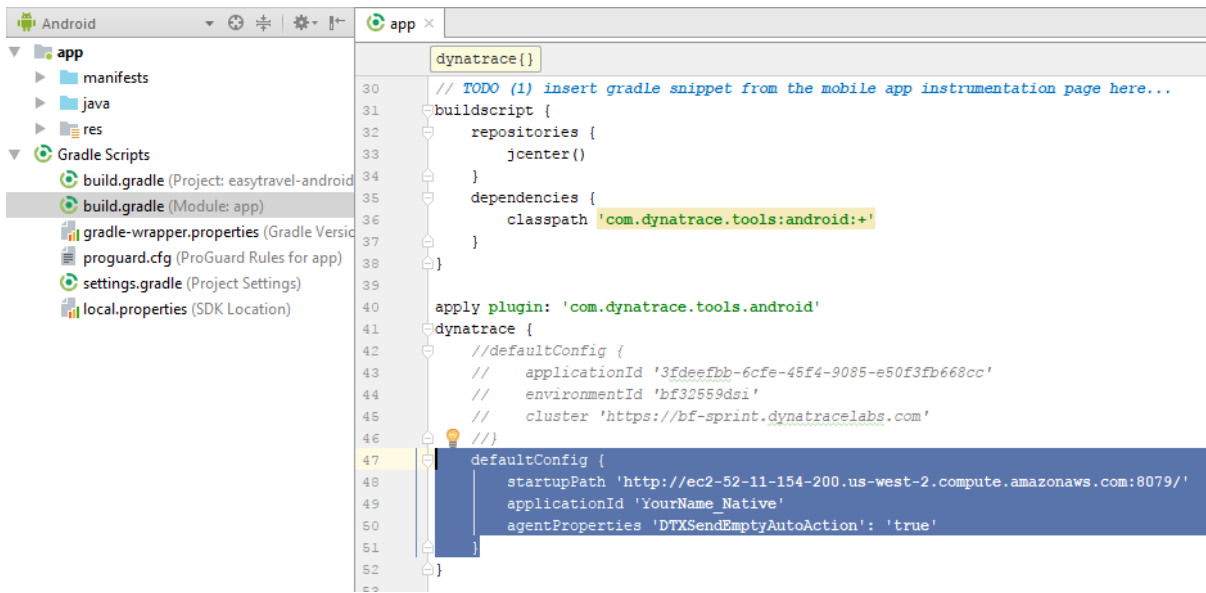
```
DEFAULT_SERVER_HOSTNAME = "ec2-52-11-154-200.us-west-2.compute.amazonaws.com"
```





2. Open the app module's build.gradle file and change the default config of the dynatrace plugin:

```
defaultConfig {  
    startupPath 'http://ec2-52-11-154-200.us-west-2.compute.amazonaws.com:8079/'  
    applicationId 'YourName_Native'  
    agentProperties 'DTXSendEmptyAutoAction': 'true'  
}
```

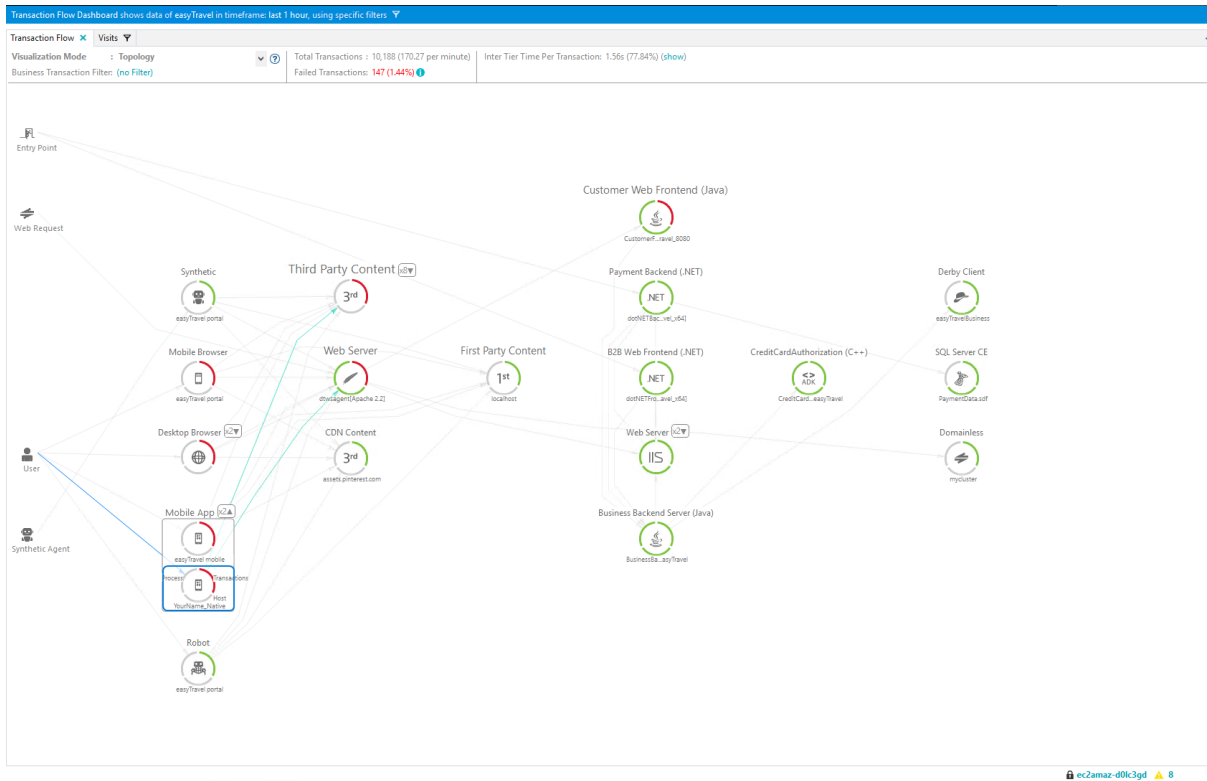


3. Run the app. Log in, book a travel, generate a crash, etc...



# Analyze the data in AppMon client

## Transaction flow



## Visits

Transaction Flow Dashboard shows data of easyTravel in timeframe: last 1 hour, using specific filters. [▼](#)

Transaction Flow [×](#) Visits [▼](#)

Visits (no grouping)

UE Index: 0.67\* Visits: 3

Visit	User Experience	User Actions	Application	Client Family	Client IP	Continent	Region	City	Country	Start Time
Visit from Linz, Oberösterreich, Austria using 3-i	satisfied	10	YouName_Native	VS Emulator 5-inch Mar...	195.50.84.65	Europe	Oberösterreich	Linz	Austria	2018-01-25 11:59:59.2
Visit from Linz, Oberösterreich, Austria using 3-i	satisfied	9	YouName_Native	VS Emulator 5-inch Mar...	195.50.84.65	Europe	Oberösterreich	Linz	Austria	2018-01-25 12:39:10.7
Visit from Linz, Oberösterreich, Austria using 3-i	frustrated	5	YouName_Native	VS Emulator 5-inch Mar...	195.50.84.65	Europe	Oberösterreich	Linz	Austria	2018-01-25 12:03:18.8

User Action	Performance value [ms]	Performance metric	User Experience	Client Errors	Failed Actions	Duration [ms]	Server Contribution [ms]	Network Contribution [ms]	Start-Time	Size	User Action Step	Action Group
Loading EasyTravel	816	User action durati...	satisfied	1	0	810.00	-	-	2018-01-25 12:39:10.725	0	1	Mobile Actions
WebRequest(httpbin.org)	117	User action durati...	satisfied	1	0	117.00	-	-	2018-01-25 12:39:11.536	0	2	Mobile ADK A...
WebRequest(httpbin.org)	1116	User action durati...	satisfied	0	0	1116.00	-	-	2018-01-25 12:39:11.654	0	3	Mobile ADK A...
WebRequest(ec2-52-11-154-200.us-we...	411	User action durati...	satisfied	0	0	411.00	2.53	395.47	2018-01-25 12:39:17.559	1	4	Mobile ADK A...
WebRequest(ec2-52-11-154-200.us-we...	234	User action durati...	satisfied	0	0	234.00	33.26	200.74	2018-01-25 12:39:18.511	1	5	Mobile ADK A...
WebRequest(ec2-52-11-154-200.us-we...	207	User action durati...	satisfied	0	0	207.00	19.31	187.69	2018-01-25 12:39:19.257	1	6	Mobile ADK A...
Web Request	0	-	-	-	-	9670.24	-	-	2018-01-25 12:39:21.163	-	-	-
Loading MainActivity	600	User action durati...	satisfied	1	0	600.00	-	-	2018-01-25 12:42:00.977	0	7	Mobile Actions
WebRequest(httpbin.org)	127	User action durati...	satisfied	1	0	127.00	-	-	2018-01-25 12:42:01.590	0	8	Mobile ADK A...
WebRequest(httpbin.org)	1123	User action durati...	satisfied	0	0	1123.00	-	-	2018-01-25 12:42:01.717	0	9	Mobile ADK A...

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## User action details

Transaction Flow Dashboard shows data of easyTravel in timeframe: last 1 hour, using specific filters.

Transaction Flow	Visits	User Action PurePaths	PurePath	Duration [ms]	Server Contribution [ms]	Network Contribution [ms]	User Experience	Client Errors	Client IP	Start Time	Sub-Requests	Failed Transactions	Location	Client
			Loading EasyTravel	810	-	-	- satisfied	1	195.50.84.65	2018-01-25 12:39:10.725	0	0	Linz, Austria	VS Er
			WebRequest(httpbin.org)	117	-	-	- satisfied	1	195.50.84.65	2018-01-25 12:39:11.536	0	0	Linz, Austria	VS Er
			WebRequest(httpbin.org)	1116	-	-	- satisfied	0	195.50.84.65	2018-01-25 12:39:11.654	0	0	Linz, Austria	VS Er
			WebRequest(ec2-52-11-154-200.us-west-2.compute.amazonaws.com)	411	3	385	satisfied	0	195.50.84.65	2018-01-25 12:39:17.559	1	0	Linz, Austria	VS Er
			WebRequest(ec2-52-11-154-200.us-west-2.compute.amazonaws.com)	234	33	201	satisfied	0	195.50.84.65	2018-01-25 12:39:18.511	1	0	Linz, Austria	VS Er
			WebRequest(ec2-52-11-154-200.us-west-2.compute.amazonaws.com)	207	19	188	satisfied	0	195.50.84.65	2018-01-25 12:39:19.257	1	0	Linz, Austria	VS Er
			Loading MainActivity	600	-	-	- satisfied	1	195.50.84.65	2018-01-25 12:42:00.977	0	0	Linz, Austria	VS Er
			WebRequest(httpbin.org)	127	-	-	- satisfied	1	195.50.84.65	2018-01-25 12:42:01.590	0	0	Linz, Austria	VS Er
			WebRequest(httpbin.org)	1123	-	-	- satisfied	0	195.50.84.65	2018-01-25 12:42:01.717	0	0	Linz, Austria	VS Er

PurePaths / Contributors / Errors

Node	Detail	Exec Total [ms]	Elapsed Time [ms]	Timeline
Loading EasyTravel		810.00	0.00	
AppStart YourName.Native (MainActivity)		206.00	0.00	
display 'MainActivity'	MainActivity	-	206.00	
Display MainActivity		72.00	134.00	
previous view disappeared		-	134.00	
onCreate 'MainActivity'	MainActivity	-	134.00	
onStart 'MainActivity'	MainActivity	-	176.00	
'MainActivity' visible	MainActivity	-	206.00	
(400) https://httpbin.org/status/400	https://httpbin.org/status/400	616.00	194.00	

Trees / Transaction Flow / API Distribution

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## Client errors

Transaction Flow Dashboard shows data of easyTravel in timeframe: last 1 hour, using specific filters.

Transaction Flow	Visits	User Action PurePaths	Client Errors
Error Type			Error Count
Mobile Errors			10
Mobile WebRequest Error			9
Mobile Crash			1
Mobile Error Code			0
Mobile Exception			0
Browser Errors			0
JavaScript Error			0
JavaScript Warning			0
JavaScript Info			0
Custom Errors			0
Custom Error Code			0

Splitting Error Filter Severity >= 0 Apply

Message	Count	Application	Build	Device Manufacturer	Device Name	OS	App ID	Model ID	CPU
(400) https://httpbin.org/status/400	5	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
(400) https://httpbin.org/status/400	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
(400) https://httpbin.org/status/400	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
(400) https://httpbin.org/status/400	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
(400) https://httpbin.org/status/400	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
(500) https://httpbin.org/status/500	4	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
(500) https://httpbin.org/status/500	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
(500) https://httpbin.org/status/500	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
(500) https://httpbin.org/status/500	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
java.lang.RuntimeException	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel
java.lang.RuntimeException: An error occurred while executing doInBackground()	1	YourName.Native	20170129	VS Emulator	5-inch Marshmallow (6...	Android 6.0	YourName.Native	5-inch Marshmallow (6...	GenuineIntel

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# Crashes

## Mobile Crash Details

Basic Crash Information:

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```
java.lang.RuntimeException: An error occurred while executing doInBackground()
    at android.os.AsyncTask$3.done(AsyncTask.java:309)
    at java.util.concurrent.FutureTask.finishCompletion(FutureTask.java:354)
    at java.util.concurrent.FutureTask.setException(FutureTask.java:223)
    at java.util.concurrent.FutureTask.run(FutureTask.java:242)
    at android.os.AsyncTask$SerialExecutor$1.run(AsyncTask.java:234)
    at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1113)
    at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:588)
    at java.lang.Thread.run(Thread.java:818)
Caused by: java.lang.RuntimeException: Intentionally triggered crash! ID: 13
    at cs.j(SourceFile:56)
    at cs.h(SourceFile:44)
    at cs.g(SourceFile:39)
    at cs.f(SourceFile:35)
    at cs.e(SourceFile:31)
    at cs.d(SourceFile:27)
    at cs.c(SourceFile:23)
    at cs.a(SourceFile:14)
    at com.dynatrace.easytravel.android.fragments.Userfragment$a.a(SourceFile:106)
    at
```

