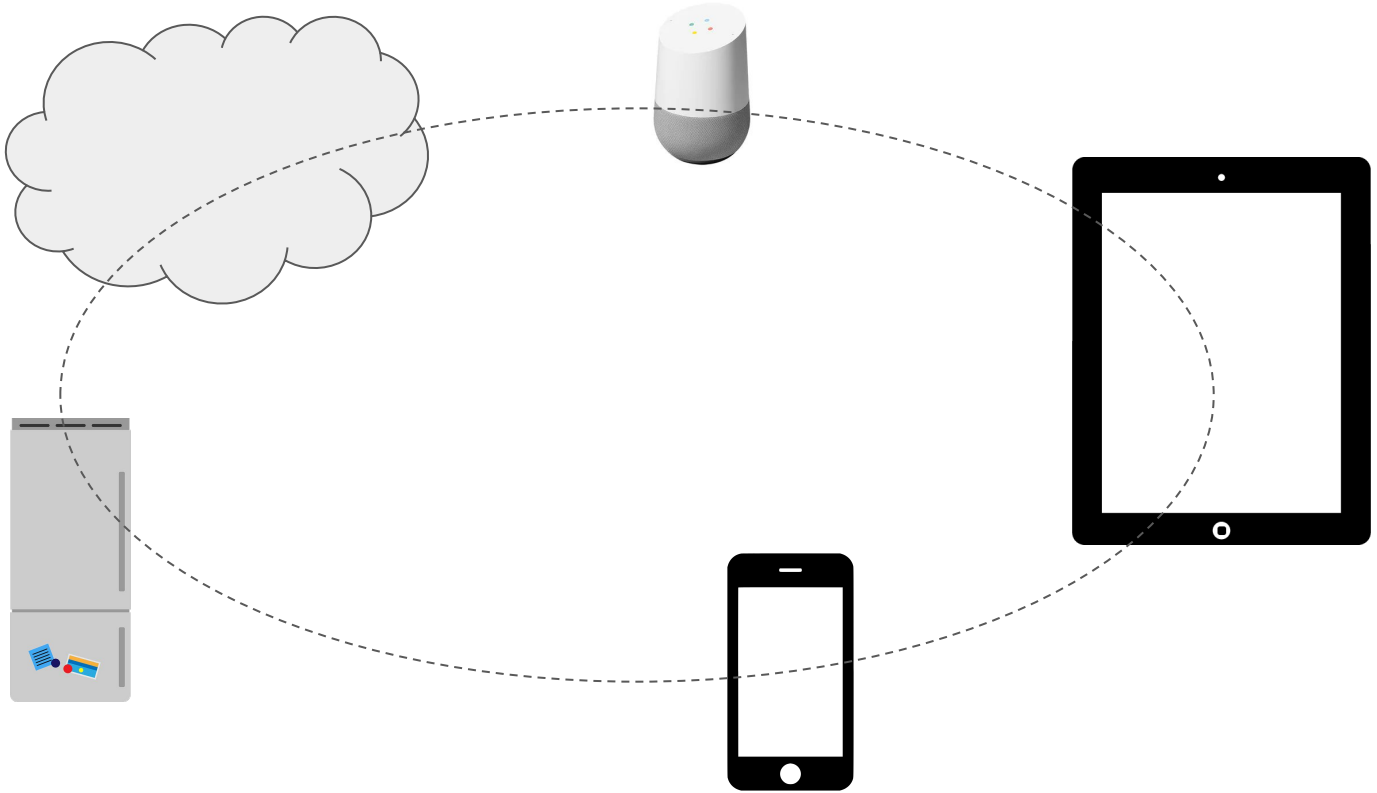
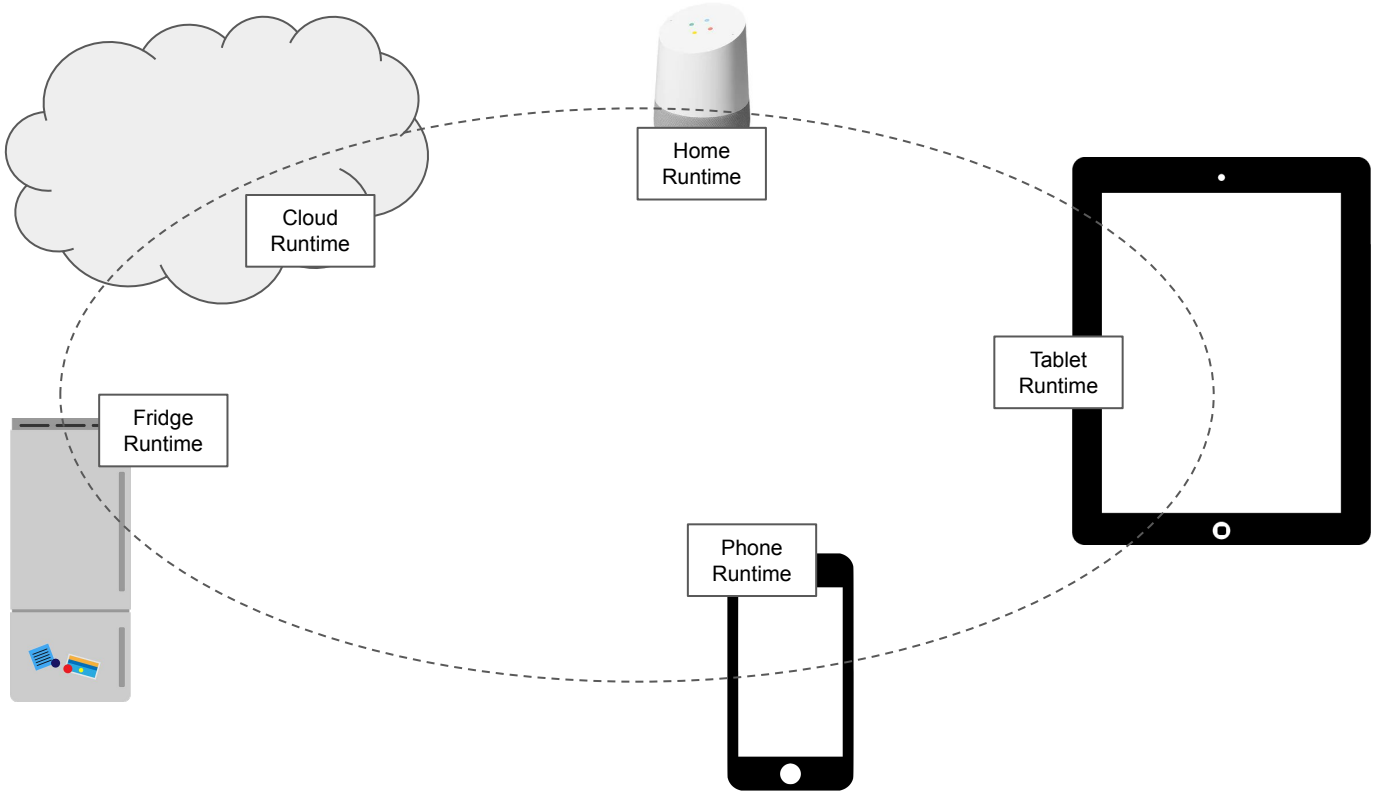
Arcs

Architecture Fever Dream

Part of the Arcs dream is multi-device experiences



Each device hosts its own Runtime

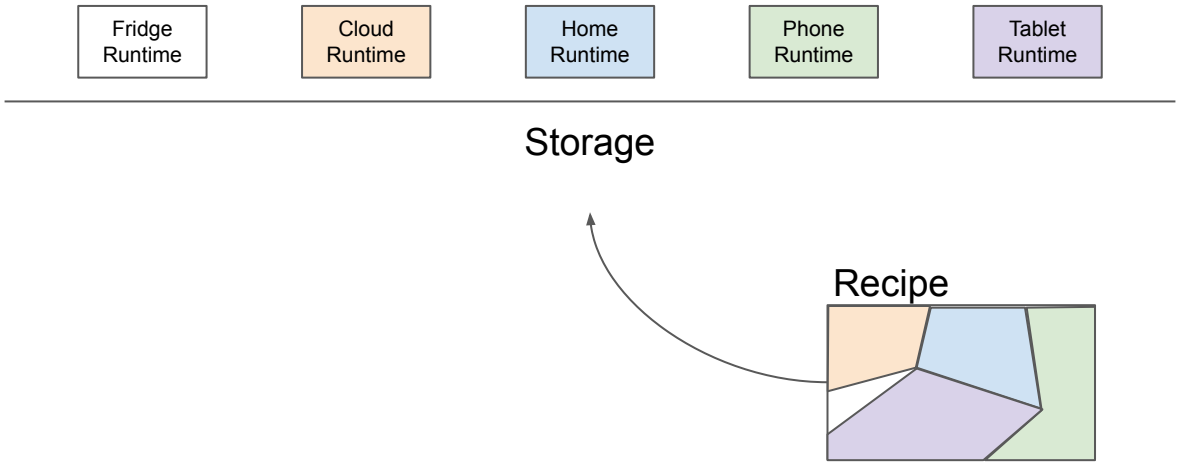


The Runtimes communicate across a shared Storage “plane”

The Runtimes communicate across a shared Storage “plane”

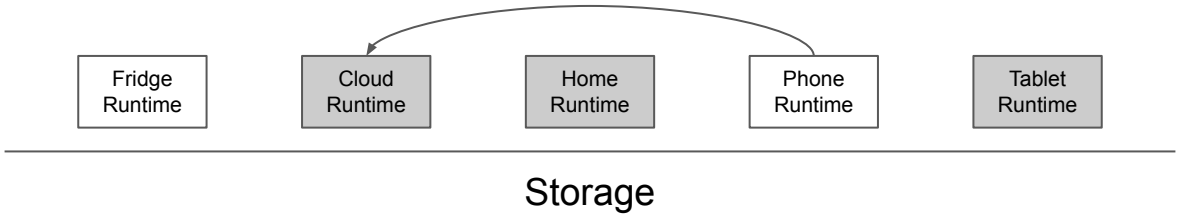
We’ve seen this work really well for multi-device arcs where the Runtimes are already established, but there are two open questions we haven’t yet solved.

The Runtimes communicate across a shared Storage “plane”



1. How do recipes get distributed across potential Runtimes?

The Runtimes communicate across a shared Storage “plane”



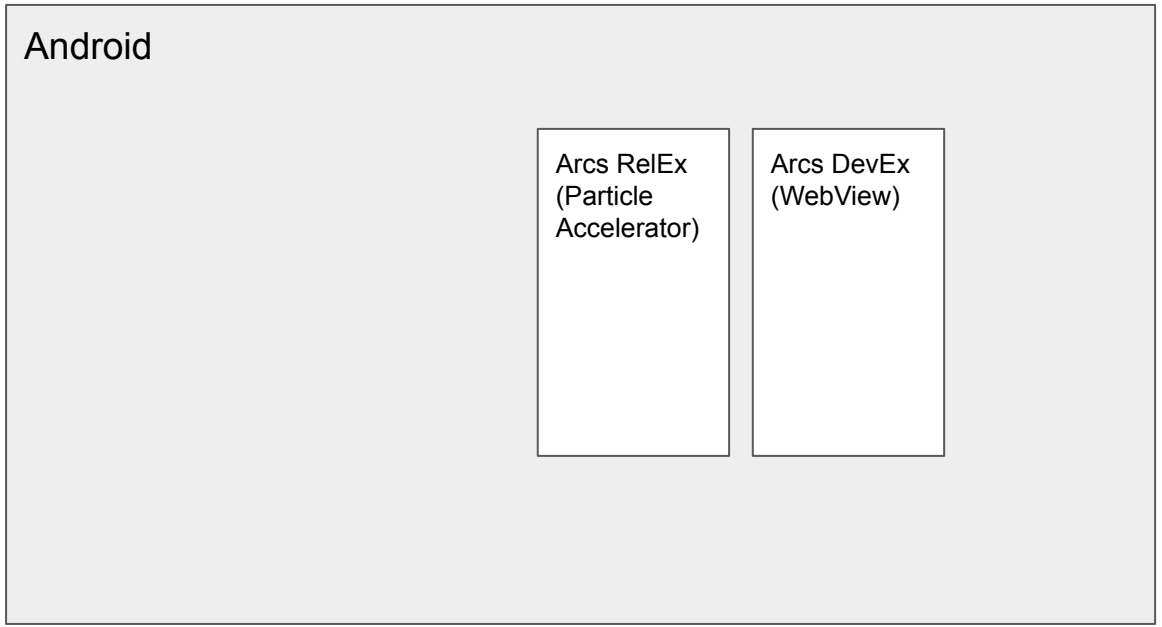
2. How can Runtimes suspend themselves and be awoken in response to Arc changes?

Intermission

Let’s take a brief look at Android

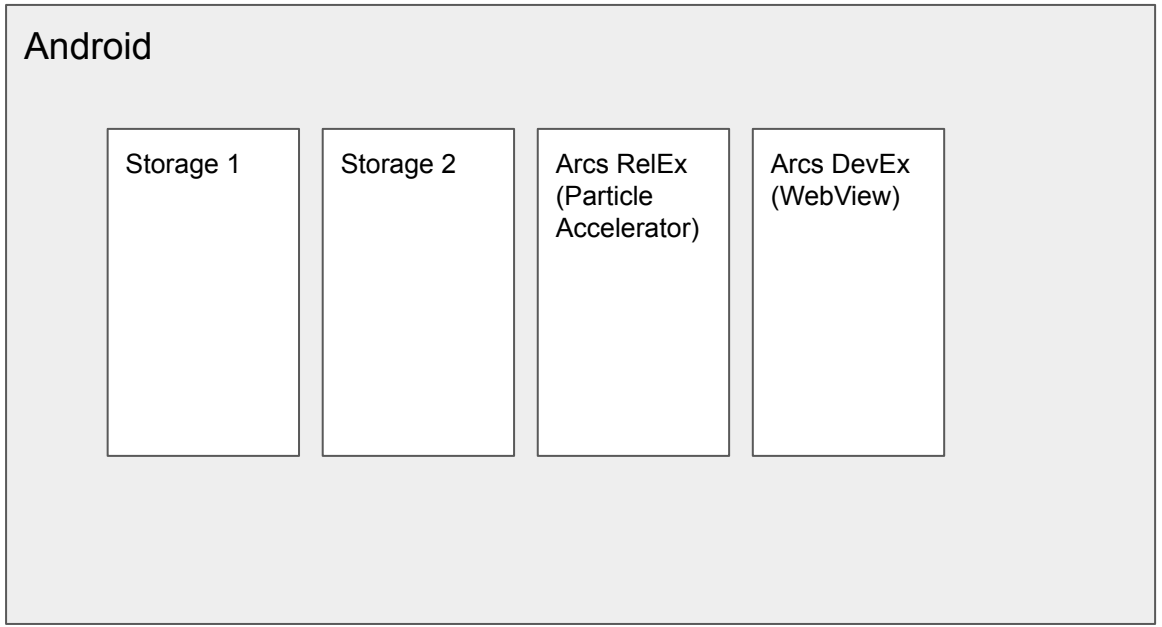
What are our Arcs needs for Android?

There’s a Developer Experience and a Production Experience..



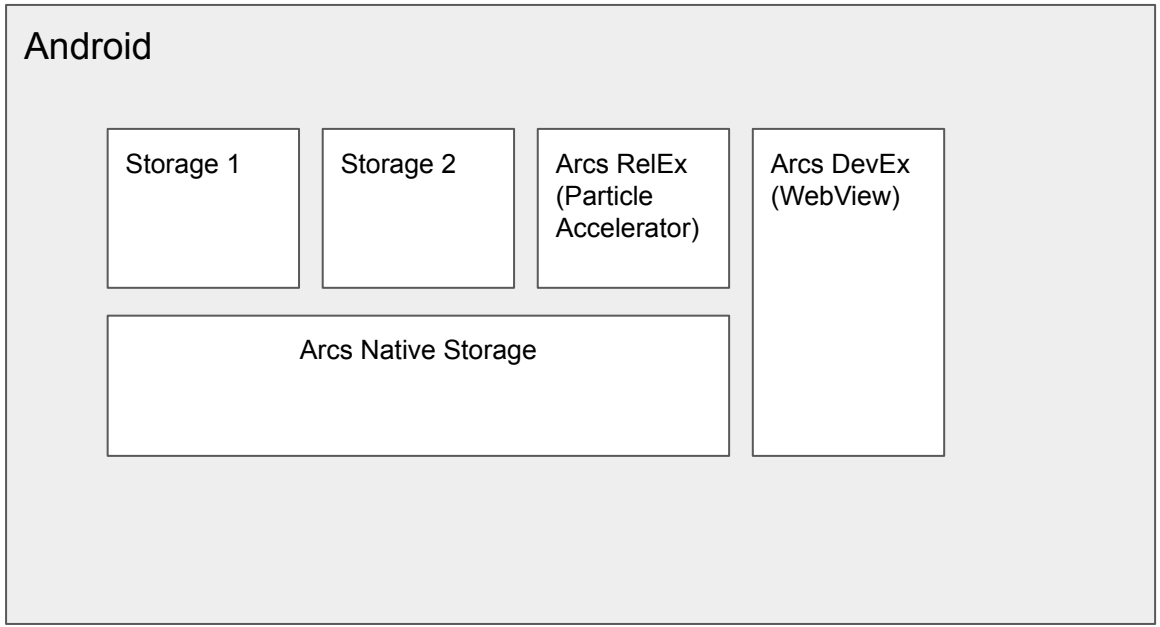
What are our Arcs needs for Android?

We’ve talked about different native features that provide active storage..



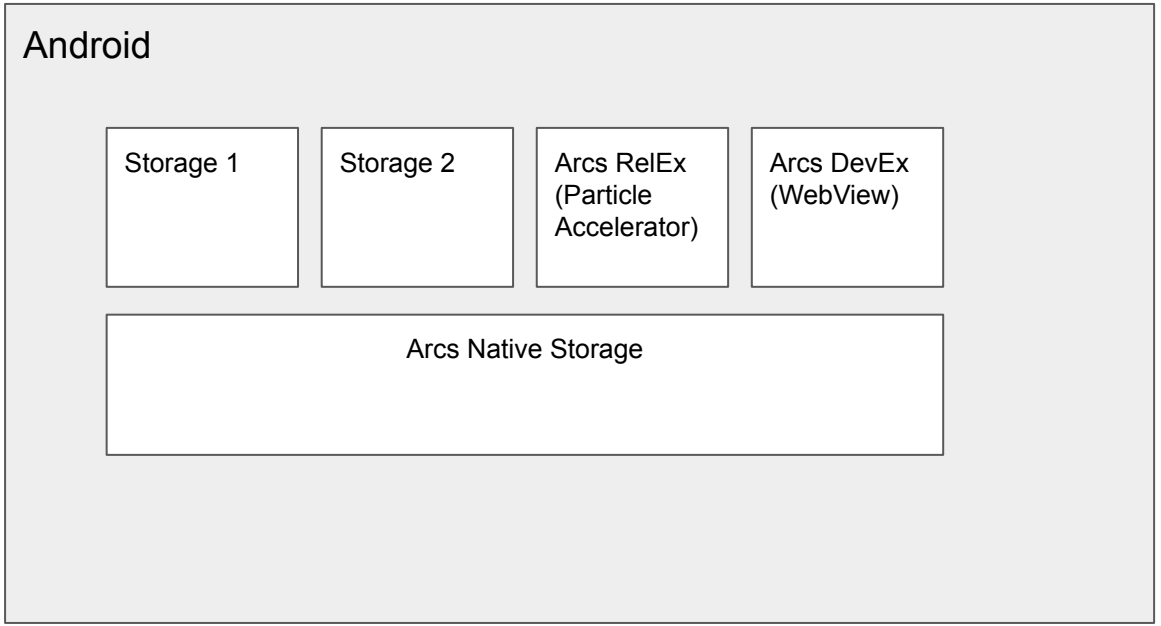
What are our Arcs needs for Android?

Eventually we want these backed by Arcs Storage



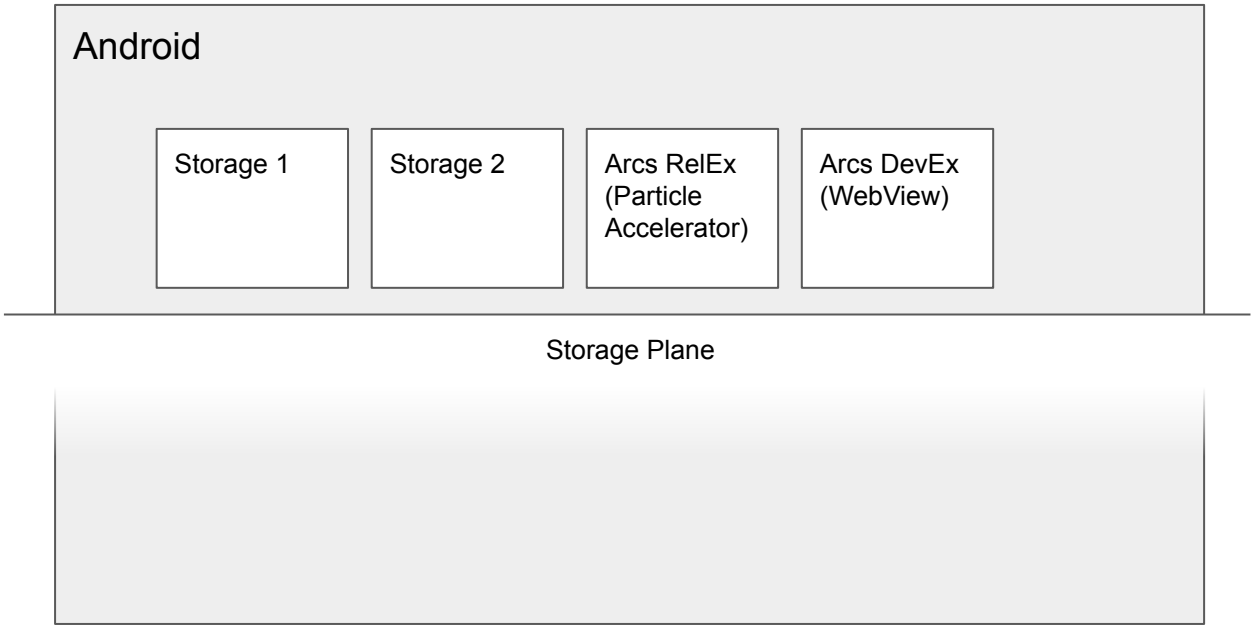
What are our Arcs needs for Android?

Ideally, that storage will replace the WebView storage engine too



What are our Arcs needs for Android?

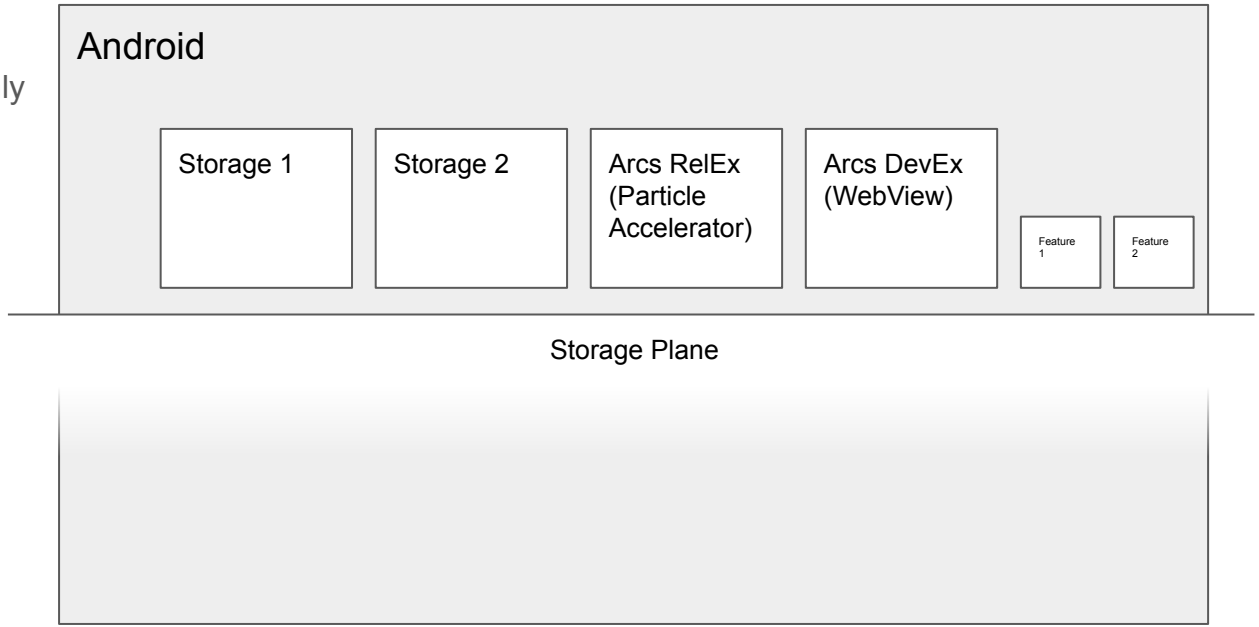
This picture is starting to look familiar.. and matches intuition about eventual multi-device support



Can Android feature particles do the same thing?

What would this look like?

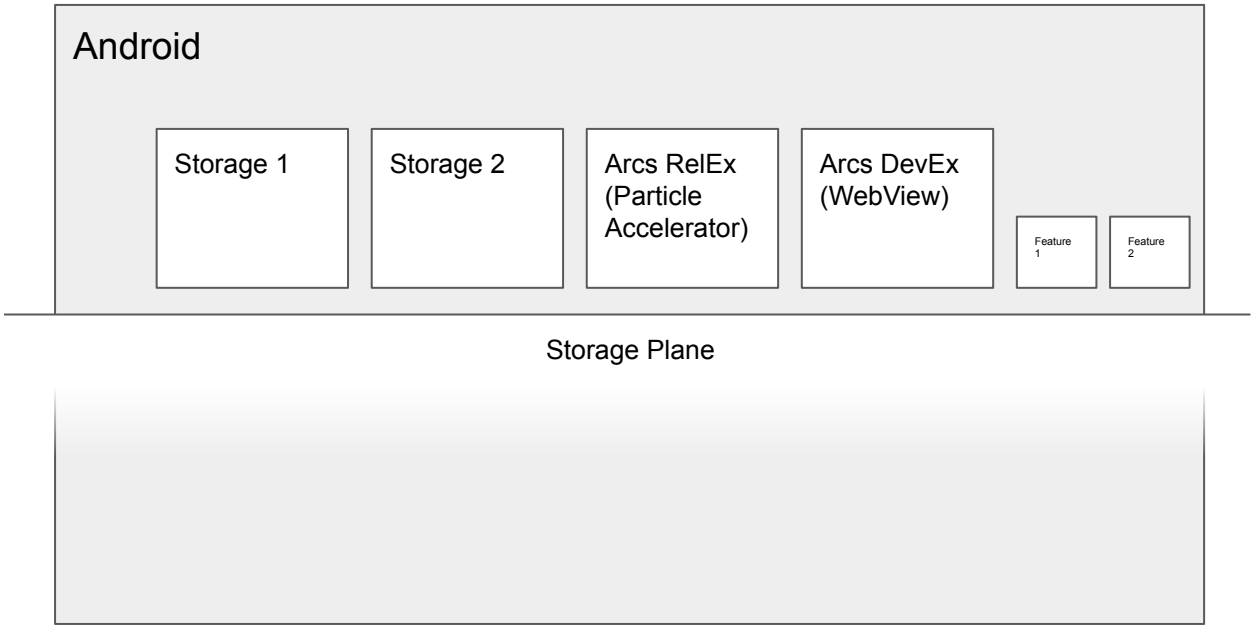
- Android services “are” Runtime environments
- .. but they would really only need to act like Runtime environments from Arcs’ perspective



What problems would we need to solve?

1. How do we tell each Runtime which particles to run?
2. How do we know when to “wake up” a suspended service if it needs to do some processing for an Arc?

These are the same problems we identified above



Conclusions

- We can build our Android environment in a way that lets us provide simple solutions to problems we know we have.

- We don’t need to build new complex architectures.

- Fever dreams are fun.