

Enhancing Randomization in Loading the Library Image in Android RunTime (ART)

Abstract

This invention relates a boot image randomisation method for an Android RunTime (ART) virtual machine during a system boot. The method comprises creating an image space in an ART heap, wherein the image space is used to load a boot image containing a boot.art file and a boot.oat file, deleting the boot image in a cache path, relocating the boot image according to a new patch delta in response to the boot image is not available in the cache path by removing all applications' OAT caches, selecting a patch delta randomly, patching and writing the boot image to a path for caching, executing an image space initialization and loading the boot image to the image space.

Figure 5 to accompany the abstract