Replicant - Issue #2028

Make a script and/or a howto that explains how to rebuild an EFS.img from the files

05/17/2020 10:23 PM - Denis 'GNUtoo' Carikli

Status:	New	**Start date:**	05/18/2020
Priority:	Normal	**Due date:**	
Assignee:		**% Done:**	0%
Category:	Telephony and mobile data	**Estimated time:**	0.00 hour
Target version:	Any version	**Spent time:**	0.00 hour
Resolution:		**Grant:**	
Device:	Galaxy Nexus (GT-I9250), Galaxy Nexus (I9250), Galaxy Note (GT-N7000), Galaxy Note (N7000), Galaxy Note 2 (GT-N7100), Galaxy Note 2 (N7100), Galaxy Note 8.0 (N51xx), Galaxy S (I9000), Galaxy S 2 (I9100), Galaxy S 3 (I9300), Galaxy S 3 4G (I9305), Galaxy Tab 2 10.1 (P51xx), Galaxy Tab 2 7.0 (P31xx), Nexus S (I902x)	**Type of work:**	Any programming languages (scripts, C, etc), Wiki editions

Description

History

#1 - 05/17/2020 11:08 PM - Denis 'GNUtoo' Carikli

We had a bug with the previous backup instructions as described in the [BackupsResearch](#) wiki page.

So some people are stuck with the individual files in /efs having been backed up but without a valid backup of raw EFS partition.

We might need to enable people in this case to recreate a valid EFS partition from the files.

To obtain the necessary information:

- We can find out which filesystem is used in the EFS by looking at what is used on existing devices. Devices pages sometimes have detailed partition information like here: [GalaxySIIIGTI9300](#) with the filesystem.
- For the file paths and permissions we can create pages like [GT-I9300EFSContent](#) that have the information.

We will then need to create a script and/or instructions on how to recreate such EFS images from the files.

The Replicant 6.0 recoveries also have mkfs.ext4 and similar tools that can help simplifying the process.

#2 - 05/17/2020 11:40 PM - Denis 'GNUtoo' Carikli

Status

Device	Partitions and filesystem	file permissions
[Galaxy S II (GT-I9100)](#)	ext4: [GalaxySIIGTI9100](#)	[GT-I9100EFSContent](#)
[Galaxy S III (GT-I9300)](#)	ext4: [GalaxySIIIGTI9300](#)	[GT-I9300EFSContent](#)
[Galaxy Note (GT-N7000)](#)	ext4: [GalaxyNoteGTN7000](#)	[GT-N7000EFSContent](#)
[Galaxy Note II (GT-N7100)](#)	ext4: [GalaxyNote2N7100](#)	[GT-N7100EFSContent](#)
[Galaxy Nexus (GT-I9250)](#)	ext4: [GalaxyNexusGTI9250](#)	[GT-I9250EFSContent](#)
[Galaxy Tab 2 7.0 GSM (GT-P3100)](#)	ext4: [GalaxyTab270GTP31xx](#)	[GT-P3100EFSContent](#)
[Galaxy Tab 2 10.1 GSM (GT-P5100)](#)	ext4[1]	
[Galaxy Note 8.0 GSM (GT-N5100)](#)	ext4: [GalaxyNote80GTN51xx](#)	

[1] As I don't have a GT-P5100, instead of looking with "mount", I looked instead at the [fstab.espresso](#). While it's in the espressowifi directory, it's included by [device-common.mk](#), which is included by [device.mk](#) in the espresso3g directory.

#3 - 05/20/2020 12:00 PM - Ama Agne

- File tutorial added

#4 - 05/20/2020 12:02 PM - Ama Agne

- File fix-permissions.sh added

#5 - 05/20/2020 12:05 PM - Ama Agne

My I9300's Modem broke and I tried restoring the EFS partition with
a faulty backup image a had from the deprecated procedure mentioned
in [BackupsResearch](#).
I managed to restore my EFS using the files (not the EFS.img) that I had.
Here is a How To and a script that tries to set the file permissions
according to [GT-I9300EFSContent](#) which I didn't try restoring the EFS
without fixing them.

Can someone take a look at "fix-permissions.sh"? Maybe someone wants to
improve it. Also after doing the procedure in the How To, I had to
"adb sideload" replicant again, because my phone only booted into the
Recovery anymore. I don't know if that would be a problem, if somebody
didn't have a fresh replicant installation before anyway.

#6 - 05/20/2020 12:10 PM - Ama Agne

- File tutorial.txt added

#7 - 05/21/2020 04:45 PM - Denis 'GNUtoo' Carikli

The fact that it refuses to boot is really strange.

It typically happens when Replicant cannot mount some "crucial" partitions (we need to improve that at some point, for instance for Replicant >=9 it
would be a good idea to be more resilient in that reguard).

So, if we take the Galaxy Tab 2 7.0 GSM under Replicant 6.0 as an example, the /fstab.espresso file has the following:

```
/dev/block/platform/omap/omap_hsmmc.1/by-name/EFS            /efs            ext4        nosuid,nodev,b
arrier=1                                                           wait,check
```

So in practice the device will not boot if /efs cannot be mounted as an ext4 filesystem.

I've read the tutorial.txt procedure and mkfs.ext4 alone should normally make sure that the device boot if the filesystem was ext4 before.

#8 - 05/21/2020 05:23 PM - Denis 'GNUtoo' Carikli

It's also possible to get adb during very early boot with [AddingADBRootToAnImage](#), which potentially enable to debug boot issues like that.

Someone probably needs to reproduce all that and debug it to not have to reinstall Replicant.

Anyway since you didn't need to wipe any data, it's not the end of the world as long as people reinstall the exact corresponding version.

That can be found with [ImagesIdentification](#). If another version is reinstalled, in some case it can make your data extremely hard to recover: if there is
mismatch between the data and the OS installation between Replicant 6.0 0003 and Replicant 6.0 0004 RC1, the data partition content is then
extremely hard to recover: I spent days to recover only part of the data of that partition. While the data is very easily accessible, putting it back on an
incompatible version of the /data partition is complicated. And as soon as there is a missmatch and that the OS booted, you end up in this situation
without any easy way to revert the effect of the boot.

#9 - 02/27/2021 08:40 AM - Denis 'GNUtoo' Carikli

- Device Galaxy Nexus (GT-I9250) added

#10 - 02/27/2021 08:52 AM - Denis 'GNUtoo' Carikli

- Device Galaxy Note (GT-N7000) added

#11 - 02/27/2021 10:07 AM - Denis 'GNUtoo' Carikli

- Device Galaxy Note 2 (GT-N7100) added

#12 - 03/26/2021 04:56 PM - _I3^ RELATIVISM

- Type of work Any programming languages (scripts, C, etc), Wiki editions added

Files

tutorial	1.88 KB	05/20/2020	Ama Agne
fix-permissions.sh	1.13 KB	05/20/2020	Ama Agne
tutorial.txt	1.89 KB	05/20/2020	Ama Agne