My Cloud OS5 NAS App Porting Changes

My Cloud Product Team

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What Are The Changes?

- For <u>On-Device NAS app</u>:
  - We are moving to Debian10 toolchain
    - x86_64-linux-gnu toolchain for My Cloud PR2100 & PR4100
    - arm-linux-gnueabihf toolchain for others
  - Upgrading the Linux Kernel to version 4.14.22
  - APKG SDK updated to new version 2.0.17 which now supports an enhanced security check
  - Use new mksapkg to package the newly ported app (md5sum: d2c47995557a918422781fe1a40aa2ec)
  - In apkg.rc set MinFWVer: 3.10.111
  - Usage: (module_name is able to get by type "mksapkg -h")
    - mksapkg -E -s -m [module_name]

On-Device NAS App - Toolchain Instructions

Debian toolchain to be used for all compilation.

For Intel: amd64

For ARM: armhf

Below are the instructions to install the toolchain and setup the build environment for Godzilla, and it is for ARM platform:

1. Install Debian 10 amd64 Linux

2. Install needed packages

    # dpkg --add-architecture armhf

    # apt-get update

    # apt-get install apt-utils=1.8.2 apt-file=3.2.2 pkg-config=0.29-6 build-essential=12.6 devscripts=2.19.5+deb10u1

    # apt-get install automake=1:1.16.1-4 autotools-dev=20180224.1 autoconf=2.69-11 autopoint=0.19.8.1-9 sudo=1.8.27-1

    # apt-get install libltdl-dev=2.4.6-9 libtool=2.4.6-9 debhelper=12.1.1

3. To build a package using armhf toolchain

    # export CC="arm-linux-gnueabihf-gcc"

    # export CROSS_COMPILE="arm-linux-gnueabihf-"

    # export ARCH=arm

    # export TARGET_HOST="arm-linux-gnueabihf"

Off-Device App API

Keystone API

- Keystone API are the RESTful APIs used to support file access to the My Cloud OS 5 products & My Cloud Home

- Each Off-Device app is required to register for a unique Client ID and Secret
  - Each user is required to login to their device from the Off-Device app
  - The Client ID and Secret is used as part of the authentication process

- Refer to the WD Content Solutions Developer site for details:
  https://developer.westerndigital.com/develop/home-main.html
  Currently the core Keystone APIs are documented in the My Cloud Home platform
  https://developer.westerndigital.com/develop/wd-my-cloud-home/api.html

When And How to Submit New App?

- Submit your On-Device App using the [Developer Portal](#)
  - You must be signed into the portal to submit your account (portal signup is free)
  - The submission will need to include a compressed file for each NAS device if you support multiple devices
  - Remember to include the icons files (180x180) and language files if used
  - You will also need the App Package Binary file (.bin), App Source files used to list your app in the catalog
    - APKG.RC file is used to show App name, version and description which needs to include your support web link

- Got questions?
  - Submit your questions via the [Developer Portal](#) or
  - Contact any of the WD team member directly

Western Digital.

Thank you!