Hello, Brillo: Peeking Under the Covers

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What is Brillo?

Android-based OS

Core Services

Secure by Default
Linux Kernel
Bootloader
Hardware Abstraction Layer
Application Framework
Native Services
Core Applications
Runtime
Y U NO YOCTO?
Brillo Core Services
Local APIs

Cloud APIs

Local APIs
Device Libraries

MMU-Enabled
libweave

Microcontrollers
libuweave

https://weave.googlesource.com/
Brillo Core Services

Metrics & Crash Reports

Robust OTA Updates
Security

SELinux MAC

Verified Boot

A/B Updates
Security

SELinux MAC
Verified Boot
A/B Updates
User Account Controls
TLS + Data Encryption
<table>
<thead>
<tr>
<th></th>
<th>Yocto</th>
<th>Brillo</th>
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</thead>
<tbody>
<tr>
<td>libc</td>
<td>eglibc</td>
<td>bionic</td>
</tr>
<tr>
<td>IPC</td>
<td>D-Bus, System V</td>
<td>Binder, Ashmem, D-Bus**</td>
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<tr>
<td>Shell</td>
<td>busybox</td>
<td>toybox</td>
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<tr>
<td>Init</td>
<td>init.d</td>
<td>init.rc</td>
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<tr>
<td>Build System</td>
<td>BitBake</td>
<td>Android.mk</td>
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Building a Brillo Product

- Get Hardware
- Install BSP
- Create Product
- Add Services
Minimum Hardware Requirements:

- ARM, x86, MIPS
- 32-bit and 64-bit variants
- 32MB RAM
- 64MB Storage
- Wi-Fi 802.11n
- Bluetooth 4.0+
Board Support Package (BSP)

Hardware Abstraction Layer

Linux Kernel

Bootloader
Board Support Package (BSP)

- SoC
- Kernel
- Firmware
- Peripheral
- Peripheral
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- Peripheral
Create a Product
Create a Product
Hello, Brillo

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milehighandroid.com
wiresareobsolete.com