

FUCHSIA

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Fuchsia is launch by Google. Fuchsia is a operating system. This system is based on kernel not on Linux. Fuchsia operating system is built on magenta. Fuchsia is launch for a smart phones and personal computer and they have a fast processor and non-trivial of ram.

Index Terms—Fuchsia, Google, Operating System, Linux.

I. INTRODUCTION

Fuchsia is a new operating system develops by Google .this system is not based on the Linuxkernel This based on the new micro kernel which is called the magenta. Fuchsia is a open source system. it is mainly in 24KB in size in some boot loaders.

Google's own documentation describes the software as targeting "modern phones and modern personal computers" with "fast processors" and "non-trivial amounts of RAM."

This operating system is designed for the new smart mobile phones and personal computer. This system is based on microkernel.

The target of the software of the fuchsia is smart and modern phone and modern personal computer.

Google recently began working on a new OS named Fuchsia that is not based on the Linux kernel like Chrome OS and Android are. it has also been designed to scale across everything from embedded Iotan application with limited RAM and a bounded set of functions, all the way up to modern smart phones and 64-bit Intel PCs with advanced graphics capabilities.

Fuchsia could end up replacing Android and Chrome in future.

II. HISTORY

The fuchsia Operating System was found as a part of a developer code on GitHub. The code of GitHub is

Pink + purple==fuchsia

The code is supposedly the early beginnings of an entirely new operating system, though Google has yet to confirm those details. Interestingly, it's not based on Linux Kernel - the core underpinnings of both Android (Google's mobile OS) and Chrome OS (Google's desktop and laptop OS).

Fuchsia is developed by the Google. Reports of fuchsia operating system have claimed that OS will release in 2017.Brian Swetland, one of Fuchsia's listed developers, reportedly explained: "The decision was made to build it open source, so might as well start there from the beginning."

Swetland also revealed Fuchsia is booting reasonably well on small-form factor Intel PCs and an Acer Switch Alpha 12 laptop.

This operating system is not based on the Linux kernel which is based on the micro kernel which is called magenta. Fuchsia is built on the magenta.

```
welcome to !h/!P
boot args 0x1 0x00 0x0 0x0
INIT: cpu 0, calling hook 0xffffffffff013064 (version) at level 0x3ffff, flags 0
e1
version:
  arch: X86
  platform: PC
  target: PC X86
  project: MAGENTA_PC_X86_64
  buildid: LOCAL
INIT: cpu 0, calling hook 0xffffffffff014f2c (vm_prehead) at level 0x3ffff, flag
s 0x1
initializing heap
calling constructors
INIT: cpu 0, calling hook 0xffffffffff014f24 (vm_post_ctors) at level 0x40000, f
lags 0x1
INIT: cpu 0, calling hook 0xffffffffff014f2c (vm) at level 0x50000, flags 0x1
INIT: cpu 0, calling hook 0xffffffffff0109e0 (acpi_tables) at level 0x50001, fla
gs 0x1
INIT: cpu 0, calling hook 0xffffffffff010470 (display_name) at level 0x50001,
flags 0x1
INIT: cpu 0, calling hook 0xffffffffff010350 (hpet) at level 0x50002, flags 0x1
INIT: cpu 0, calling hook 0xffffffffff01037c (apic) at level 0x50002, flags 0x1
```

Screenshot of the Magenta kernel, part of Fuchsia

It's a "medium-sized microkernel" based on a project called Little Kernel, which is meant for embedded systems, such as a device that has a specific purpose but doesn't require a whole OS, like a router or watch. Also, the two developers listed on Fuchsia's GitHub page - a senior software engineer at Google and a former engineer on Android TV and Nexus Q - are well-known experts in embedded systems. Google's documentation notes Magenta supports user modes, graphics rendering, and a "capability-based security model". Although all this points to Fuchsia being an OS for Wi-Fi connected gadgets, it's worth bringing up that Google already has an IoT platform called Brillo.

Fuchsia will also use Google's own Dart programming and a new user interface based on Flutter, the open source mobile development framework built for creating high-performance apps in keeping with Google's Material Design language.

III. DEVELOPMENT

Fuchsia is developed by the Google. It is developed in private by the Google

Which point the source code is made available publicly? Fuchsia approved the various license including revised BSD, NIT, APACHE2.

The fuchsia is developed because it has a greatly improve graphics quality for the new smart phones and personal computer and look like Google might be searching for great graphics in the software domain whereas, many are focusing in the hardware domain. It could be used to power Internet of Things (IoT) devices, such as Google's On Hub router.

IV. FEATURE'S OF FUCHSIA

Google recently began on the working on a new operating system is fuchsia which are not based on the Linux kernel like Google chrome and android operating system. It is based on magenta which is a medium sized micro kernel based on the project which is called the little kernel.

Fuchsia is based on the magenta, and seems to show signs of begin used (IOT) internet of things and embedded devices but also scalable across on smart phones;

Fuchsia could end up replacing android and operating system (OS) chrome or complement them as an additional as or it is just on experiment that gets shut down before it sees the light of the day.

V. TECHNOLOGY INVOLVED IN FUCHSIA

A. *Escher*

Android police reported that fuchsia will be combing Escher rendering with open GI

Escher rendering feature volumetric soft shadows color bleeding, light diffusion and lens effect.

This will greatly improve graphics quality and look like Google might search for great graphics in the software domain

Where as many are focusing in the hardware

B. *DART programming Language*

It is no wonder that Google own programming language dart of fuchsia.

Dart is a multipurpose programming language .it is used to build web apps, light apps for internet of things (IOT) and mobile apps.

This is really emphasis on the idea that fuchsia might be a universal operating system after all.

VI. CONCLUSION

It will be big and it will have an impact. If it comes out as a universal OS running on desktop as well as mobile devices, Then, even Windows might face some serious competition.

As of desktop Linux, It will face its fair share of challenges. Fuchsia will be open source, fast, reliable.

Initially, I had doubts Fuchsia OS might hinder Linux's growth. But then, Linux recently completed 25 years. 25 years of facing challenges, winning challenges and growing. Linux is built on a rock. It has a loyal user base. Awesome people contribute and make Linux better than ever. Linux will be better than ever.

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