

# Elastos Executive Summary

Elastos.org

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Elastos is an ongoing open source OS project, which facilitates the new generation of universal apps running anywhere, such as in AR/VR headsets, IoT gateways, game consoles, phones, PCs, TVs, and cloud servers (see Windows 10 UWP). Programmers can use any of three kinds of languages to develop applications: C/C++, Java and HTML/JS. Elastos is different from an Android-like OS in at least four aspects:

1. Elastos has a complete set of novel C/C++ APIs and frameworks, which correspond to the Java APIs and frameworks of Android. With better performance and a smaller footprint, Elastos is a better fit for embedded systems and machines with wireless peripherals. Elastos also supports almost all Android Java and JS APIs and frameworks. POSIX APIs are deprecated.
2. Elastos has a distributed OS runtime to guarantee end-to-end security and integrity across the Internet. With built-in metadata-driven reflection technology, Elastos can automatically generate code to bridge programming modules across languages and machine boundaries. In other words, applications, services and IoT devices are prohibited from sending/receiving network packets directly, in order to fence off network attacks initiated from third party software and hardware.
3. Elastos runtime has a pioneering, service-oriented architecture, designed ideally for containers/virtual-machines. An Elastos runtime can be thought of as a CppVM (vs. JavaVM) without a leaking bottom, i.e., there are no Java-Native-Interface (JNI) equivalent mechanisms to expose the underlying physical machine or host OS. This prevents the possibility of malicious code penetrating into the system layer.
4. Elastos is decentralized across the Internet, and utilizes blockchains to authenticate user IDs, application IDs, as well as machine IDs. To build a flourishing ecosystem, anybody may freely implement their own markets, social apps, search engines, location-based services, advertisement agents, and so on, while being rewarded with Elastos coins.

The goal of Elastos is grand and exciting. We hope you will join us to build a new, innovative Internet infrastructure to change the world.