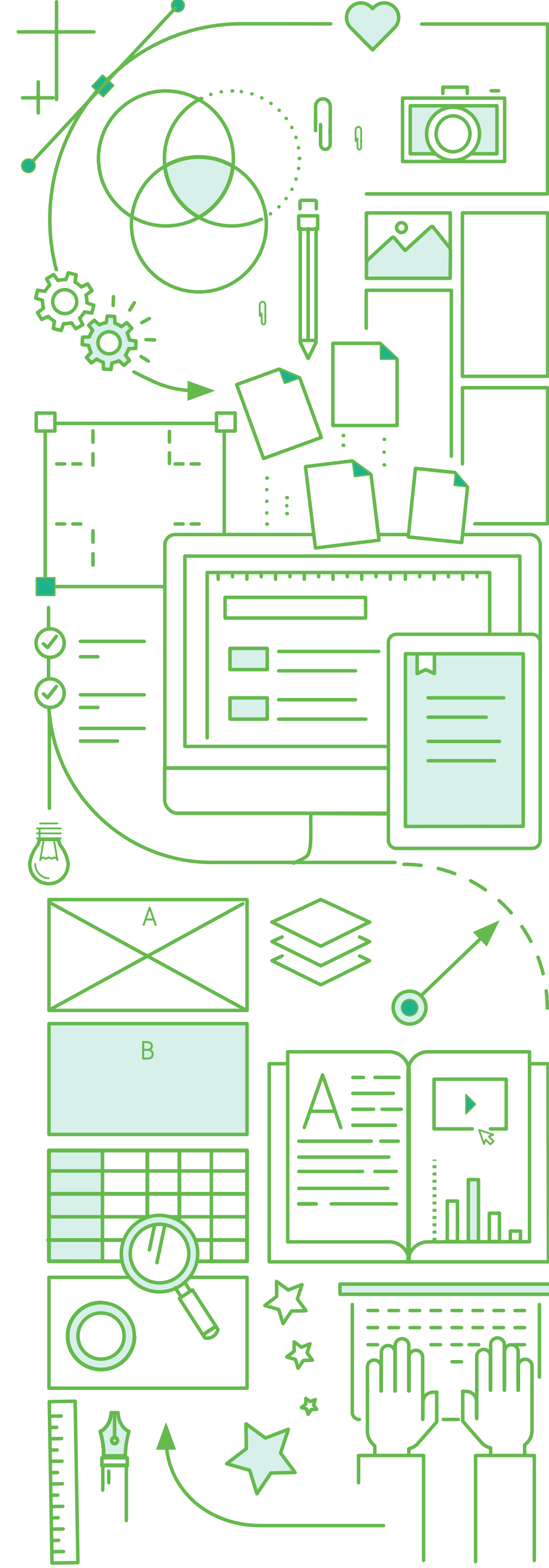


tech brief



MontaVista

# High-Speed Low Drag Linux for Networked Connected Warfare



# MontaVista, the leader in embedded Linux, offers the Military/Aerospace market a high quality, turnkey Linux for Network Centric Warfare (NCW).

In the age of Network Centric Warfare (NCW), where networked armed forces have tactical advantage over the more traditional counterparts. Military success now depends on the ability to communicate actionable information among command centers, troops in the field, UAVs and other military assets. Although new technologies are continually being developed to meet military demands, this transition to NCW has created new uses for existing technologies, a few of which have been used for many years in the commercial realm before making the move into military applications.

The adoption of interconnected devices, opens up multiple challenges for system designers including performance, security, fault-tolerant/resiliency, and serviceability in both device and network context.

MontaVista® Linux® Carrier Grade eXpress (CGX), delivers Carrier Grade reliability, security, and serviceability that is highly configurable, flexible, and of consistent high quality.

CGX meets the demands of the interconnected intelligent devices, providing application portability, dynamic configuration, field maintenance, and real-time performance in a single platform.

By leveraging Yocto project, MontaVista® Linux, offers an ideal platform for developers who want to leverage the flexibility of a true open source development platform, as well the ability to achieve rapid time to market.

## Benefits

CGL: Ease of development using packaged tooling and platform

Real-time: Enabling time critical data processing and control equipment

Security: CGL-level hardening, timely CVE fixing.

Expertise: Years of embedded platform expertise, translating technology to medical use-cases

Quality: Recognized leader in embedded Linux commercialization with proven required long term support

## Key Features Highlights

Latest Yocto & Linux Kernel Long Term Support (LTS) with latest GCC toolchain

Pre-built cross architecture BSPs based on latest ARM® & Intel® X86 64

Carrier Grade: High Availability, Serviceability, Long Term Support

Virtualization: Linux Containers (LXC), Docker TM, & KVM

Advanced Graphics profile

# Cybersecurity Threat and Prevention

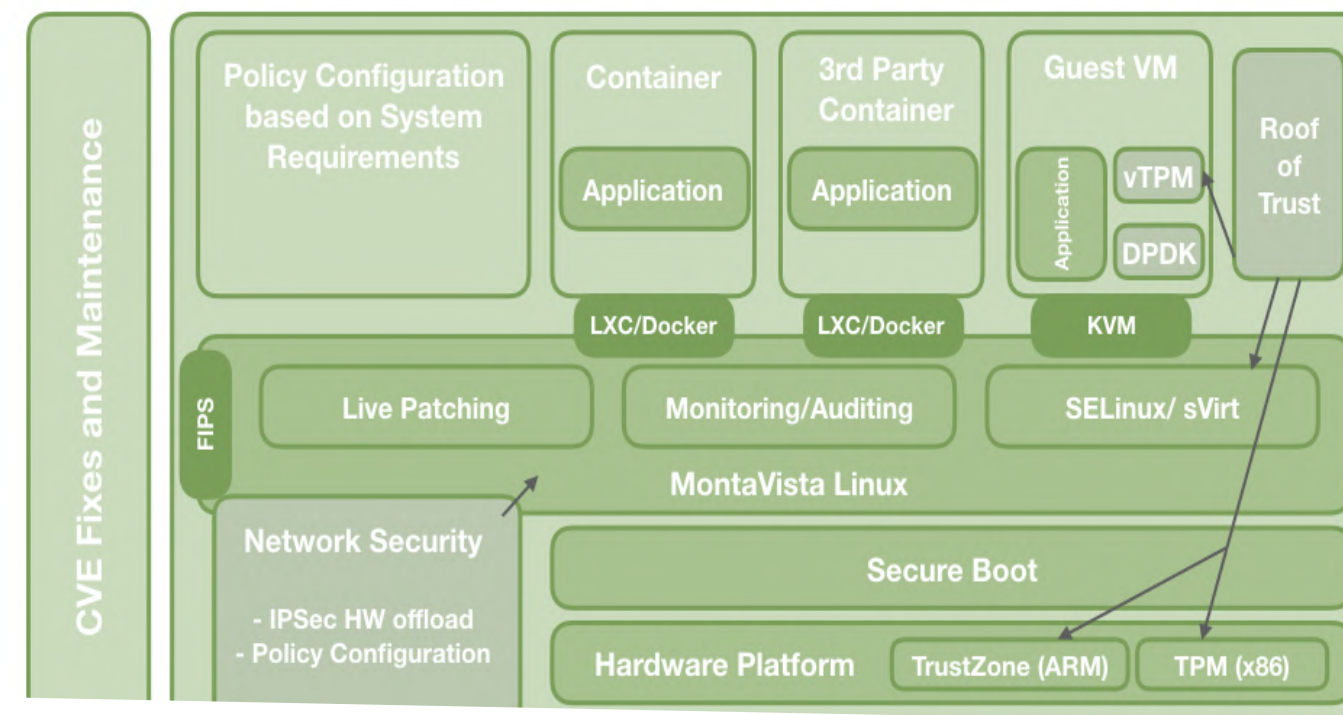
Cybersecurity challenges for edge connected devices are on the rise, some experts say exponentially.

Linux and ARM offer native technologies readily available to help create solutions that secure onboarding and enable cryptographic security. Encryption for data at rest and in motion, integrity management, and secure boot will be a requirement to meet HIPAA laws for standards for electronic exchange, security, and privacy of patient health information.

As a trusted Operating System Vendor, MontaVista receives notification of all security fixes and CGX security team provides rapid updates to the CGX platform.

MontaVista meets FDA needs for COTS software through:

- Regular customer Audits (Quality Assurance Process)
- Open testing framework (MVTest)
- Extended product support lifecycle (10 Years +)
- CVE process and Common Criteria OSPP compliance.



*“The continuous and broad peer-review enabled by publicly available source code supports software reliability and security efforts through the identification and elimination of defects that might otherwise go unrecognized by a more limited core development team.”*

(DoD 2009 OSS memo)

\* Carrier Grade Linux  
Carrier Grade Linux (CGL) is a set of specifications which detail standards of availability, scalability, manageability, and service response characteristics which must be met in order for Linux kernel-based operating system to be considered "carrier grade".

## Success Story

MontaVista was chosen as the supplier for BAEs Naval and Artillery weapons platform. Mikael Alfredsson, Manager Electronics & Electrical Design, BAE Systems Bofors:

“Military customers demand systems of the highest quality, and require support for extended lengths of time. At the same time, BAE needed a development environment that allowed us to rapidly deliver new systems to market to meet the needs of our customers“. "By selecting MontaVista Linux we are able to achieve all these objectives, an open source operating system of the highest quality rapid development, and long term support from Linux experts.”

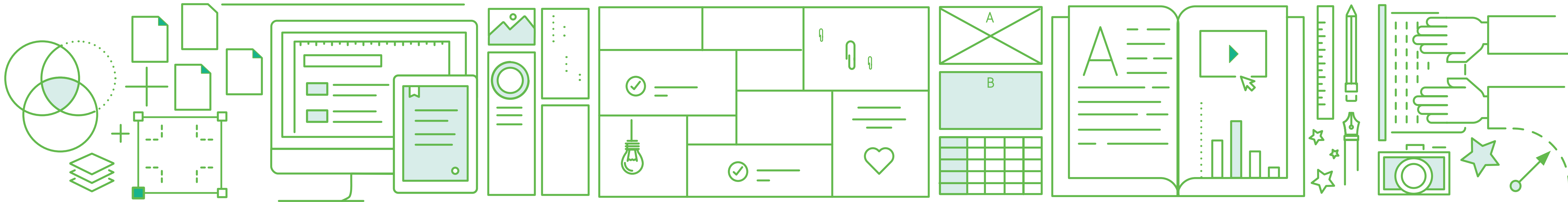
## Key technical criteria for MontaVista’s selection

- Real-time response time: MV Linux and sensor inputs are handled in real-time.
- Advanced Profiles for, Virtualization (Docker & Kubernetes), Graphics (QT/X11), & Security (Secure Boot, IMA/EVM, “Authentik” & OP-TEE framework)
- Ease of development using packaged tooling and platform.
- Military systems have a long life span, and need to be reliable and future proof.



## About MontaVista Software

MontaVista Software is a leader in embedded Linux commercialization. For 20 years, MontaVista has been helping embedded developers get the most out of open source by adding commercial quality, integration, hardware enablement, expert support, and the resources of the MontaVista development community.



MontaVista Software

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