



# Conquering Security in the IoT Era

The Internet of Things (IoT) opens up game-changing new opportunities from increased connectivity and the ability to better leverage data-driven insights, but it also ushers in unprecedented risks. With the proliferation of connected devices, the potential for new vulnerabilities is staggering.

Cyberattacks can disrupt businesses, compromise intellectual property, or wreak financial and reputational damage. In the case of critical infrastructure, such as defense, energy, industrial automation, medical, and transportation applications, they can compromise national security or even result in life-threatening consequences. With the stakes higher than ever, the time to act is now.

## AT WIND RIVER, TRUST IS EMBEDDED

Security is embedded in our DNA at Wind River®. It is part of our rich heritage of more than 30 years in mission-critical systems in markets such as aerospace and defense. It is built into all the technologies we provide to help you develop trusted and reliable solutions.

Our solutions and services deliver everything needed to secure your hardware and software, protect communication between devices and across systems, safeguard them over time, and respond quickly as new threats emerge. What's more, our development processes and security capabilities meet rigorous requirements in place across many industries.

## DEFINE YOUR SECURITY STRATEGY WITH PROFESSIONAL SERVICES

Different devices, systems, and industries have varying security requirements and often require a custom touch. Our Professional Services can deliver a consultative process to determine the type and level of security appropriate for your project. Using the security principles of the CIA triad model, our assessment will help you understand the Confidentiality, Integrity, and Availability considerations of your system architecture, set security policies, and guide your security investments. We can help you build in security from step one and for every stage of the process.

## SECURITY INCIDENT RESPONSE

Knowing that savvy attackers could find vulnerabilities in even the most secure systems, Wind River has developed a best-in-class incident response process. Our team actively monitors a variety of sources (NIST, US-CERT) through the Common Vulnerabilities and Exposures (CVE) database at [cve.mitre.org](http://cve.mitre.org), will proactively notify you of potential vulnerabilities that might impact supported Wind River products, and will offer resolution measures even before the community is aware of the vulnerability. Our response process helps protect devices from cyberattacks even after product deployment.

## WIND RIVER HELIX: SOLUTIONS AND TECHNOLOGIES FOR IRON-CLAD SECURITY

Wind River Helix™ is our comprehensive portfolio of solutions to address the system-level challenges and opportunities of IoT. With built-in security capabilities, our offerings enable you to implement comprehensive security that minimizes attack surfaces end to end, from devices through communications networks and gateways to the cloud. Our offerings follow a strict security development process from assessment through deployment, providing reassurance that these solutions are highly secure and reliable for critical infrastructure IoT systems.

Our Helix portfolio includes these offerings:



### **VxWorks**

The market leader for embedded devices, VxWorks® has long been the de facto real-time operating system for mission-critical systems. VxWorks provides built-in security capabilities such as kernel hardening, access control, time and space partitioning, secure boot, and cryptographic services, and it adds advanced security capabilities for design, boot, runtime, and power down.



### **Wind River Linux**

Wind River Linux combines the latest code from the most important open source technologies with commercial grade security vulnerability protection, enabling you to leverage the flexibility of open source without compromising security. In addition, Wind River adds a variety of security features such as access control, memory protection, identification and authentication, cryptographic services, secure networking, and system auditing to enhance the security of community Linux.



### **Wind River Titanium Cloud**

Designed for the rigorous demands of carrier and critical infrastructure markets, the Titanium Cloud™ portfolio of virtualization software supports the intensive performance, reliability, and security needs of the world's most demanding systems. It delivers a virtualization platform with carrier grade security, high integrity (i.e., monitoring, recovery), and confidentiality (i.e., secure storage, encryption).



### **Wind River Helix Device Cloud**

Designed with a multilayered security approach from the edge to the enterprise, Device Cloud securely connects, collects data, and manages devices for complex connected systems. With the secure device management capabilities of Device Cloud, you can implement security measures across each phase of the IoT device lifecycle via built-in data encryption and device authentication technologies.



### **Wind River Helix Chassis**

The automobile is becoming increasingly connected and open to digital attacks. With Helix Chassis, Wind River delivers a software foundation so you can innovate and secure your vehicle systems, drawing from its heritage in mission-critical industries such as aerospace, defense, and industrial as well as its decades of automotive experience. We can assist you at every step, from initial design to software development to system integration, to help you deliver secure and safe vehicles for the next generation.



### **Wind River Simics**

A single software bug can open the door to potential vulnerabilities, but simulated systems can enable you to automate testing to protect against security threats. Simics® offers both automated testing and unparalleled control, enabled by the most advanced simulation technologies possible.

## **SECURITY IN A VULNERABLE WORLD**

As more devices become connected, system exposure has vastly increased, with new threats growing at an alarming rate. To minimize these risks and fully realize the opportunities of the IoT, it is imperative to secure these devices and systems. Wind River solutions and expertise will equip you with proven strategies and technologies to enable you to deliver secure devices and systems that are ready to counter the most sophisticated attacks of today and tomorrow.

