



Remote Device Updater

RDU Benefits

- Secure
- Proven
- Reliable
- Failsafe
- Feature Rich
- Scalable
- Standards Based
- Local In-Factory Provisioning
- Remote Over-the-Air Updating

Overview

A common device requirement is the ability to provision device software remotely, but reliably updating software while an operating system is running can be problematic. Intrinsic's Remote Device Updater (RDU) is a scripted boot loader and image updater that solves this problem.

RDU is a patented, secure, failsafe and feature rich in-field software updater that provides software update capability to devices ranging from consumer electronics, to industrial handhelds, to deeply embedded controllers. RDU's failsafe nature guarantees image updates or reverts to the last known verified state.

Whether you are provisioning a device for the first time in the factory, or updating software in the home, or recovering from a device malfunction, RDU automates these functions in a timely, efficient, and cost effective manner.

Wide Range of Updating Mechanisms

RDU can update whole images or selected components, via USB, Serial I/F, SD card, Ethernet, Wi-Fi or cellular modem.

RDU uses IP based networks, including the Internet, as the communications backbone. Remote provisioning of devices located anywhere in the world can easily be achieved utilizing wired or wireless based networks.

Flexible Scripting Language

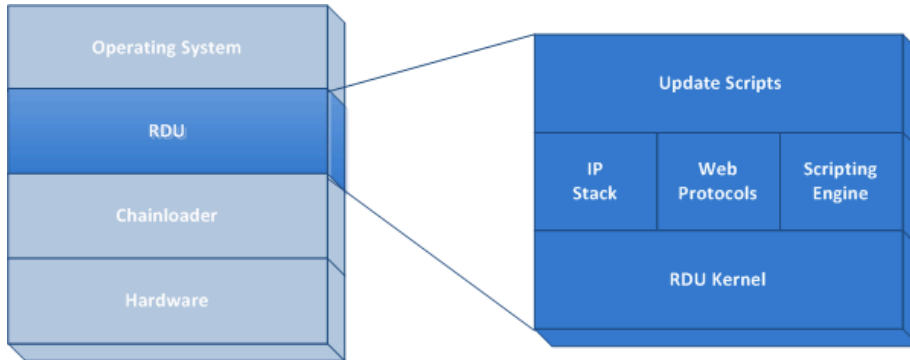
The RDU scripting language provides the functionality to implement different update and recovery scenarios. RDU employs an interpretive scripting language that is full featured and extensible, which allows any update scenario imaginable. This includes updates to whole images or selected components, such as scripts, application, data files, and operating systems. This also enables customers to change the functionality and behavior of the bootloader without updating the bootloader itself.

Improved Service Performance

With the ability to manage the updating of thousands of devices simultaneously through RDU, the need to dispatch a service technician or to recall a device is eliminated. The most current software is used at all times and software configuration problems at the device level can be eliminated. This creates a significant market advantage by reducing operational costs, improving responsiveness to customer demands and enhancing process efficiencies. By providing an automated and flexible provisioning and recovery service, RDU is able to significantly differentiate itself from other existing bootloader offerings in the market.

Architecture

Intrinsyc's RDU is a smart bootloader located in flash memory, and is the first software that runs at boot time. RDU's primary function is to load and start the operating system (OS) from flash. However, RDU has a powerful feature set that permits device provisioning, upgrading, and disaster recovery.



The key architectural components of RDU consist of:

- **Operating System.** RDU supports Linux, Android, QNX, Windows CE and Windows XPe
- **Update Scripts.** RDU provides a simple but very flexible mechanism for implementing updating rules and device configurations
- **Scripting Engine.** RDU support a robust and extensible scripting language based upon a core set of built-in provisioning commands. The scripting language provides language constructs (IF, ELSE, ENDIF) checksum handling, image metadata data access, image verification, and networking access.
- **IP Stack:** RDU is based on a fully functioning IP stack at it's core
- **Web Protocols.** RDU uses Web protocols to provide transport mechanisms between the device and the remote server
- **Kernel:** The RDU kernel operates in a small footprint and provides driver support for the key peripherals, such as Wi-Fi, Ethernet, LCD, and USB.
- **Hardware:** RDU is hardware independent and can be ported to any ARM, MIPS or x86 based processor
- **Chainloader:** RDU is compatible with uboot and other chain loaders

Intrinsyc Enablers:

Intrinsyc has developed a number of IP bundles called "enablers" to help our customers get their products to market faster. Our enablers are innovative, proven technology and IP solutions to some of the most complex technical obstacles faced by device makers.

- Cross platform telephony stack
- Automated telephony test suit
- Touch and gesture UI framework
- Intelligent remote update solution

Our Partners:



About Intrinsyc

Intrinsyc empowers device makers, mobile operators, and silicon vendors to deliver compelling, next generation mobile and embedded devices with faster time-to-market, higher quality, and differentiating innovation. Our customers and partners rely on our award-winning device development software and services including our industry-leading navigation software and LBS solutions. Intrinsyc globally supports customers with solutions that span all major mobile operating systems and platforms including Android, BlackBerry, Linux, Symbian, Windows Embedded CE and Windows Mobile. Intrinsyc is publicly traded (TSX: ICS) and headquartered in Vancouver, Canada, with offices in China, Israel, Taiwan, U.K. and the United States.

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