

# Operating System (OS) Migration for Multiple Product Lines

## BUILDING AND EXECUTING A PLAN TO MANAGE A COMPLEX OS MIGRATION

### SITUATION

- Current RedHat Linux OS was severely outdated and no longer supported
- Migrations between RedHat releases were infrequent as the OS changes in each release required substantial rework
- Patch release cycles took more than 90 days to release for critical vulnerabilities
- No standards or acceptance test for what services were provided to the application by the base OS

### CHALLENGES

- Outdated OS made it impossible to stay on schedule with maintenance releases and bug fixes
- Migrating RedHat releases caused non-trivial changes to the application software to adapt to OS and library changes
- Because each product line had its own OS and software stacks, none of the application code could be shared between products

### SOLUTION

- Defined requirements and implemented an OS abstraction layer to insulate applications from future OS changes and/or migrations that could also be used to support applications regardless of OS
- Configured a layered test approach consisting of unit, functional and integration tests; carried further into a continuous test strategy to underpin an automation framework
- Established process for integrating, testing, and deploying critical patches to meet FDA guidelines and ensure no adverse effects on deployed software

### RESULTS

- Successful OS migration from RedHat Linux OS to WindRiver Linux completed
- Multiple products now on one common OS
- New testing practices learned from MedAcuity will ensure high quality and timely future releases

### ABOUT MEDACUITY

MedAcuity is a specialized engineering firm that focuses on medical technology software development. The trusted and experienced firm was founded in 2007 by a team of seasoned software engineers who identified opportunities to fill gaps in the engineering expertise and efficiency facing the medical technology industry. MedAcuity offers extensive experience across the MedTech industry with full life-cycle software development and subspecialties in other areas including tool validation, algorithm development, and cybersecurity.

Accelerating the pace of innovation while reducing development time and risk.

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