

## Problem

Some RTAI files need root permission and S-bit. But these are lost with a binary installation of ACS

## Solution

Installing the binary ACS package results in the ownership of every unpacked file being that of the unpacking user, e.g. `tjuerges.staff`, if the user is by any reason not root.

This is the normal behavior of the tar command and is for security reasons.

Some files used for RTAI have to be owned by root and must have the S-bit set in order to work properly.

These settings are lost when installing ACS from the binary distribution.

The affected files are (for ACS 4.1):

- `/alma/ACS-4.1/ACSSW/bin/loadLkmModule`
- `/alma/ACS-4.1/ACSSW/bin/unloadLkmModule`
- `/alma/ACS-4.1/ACSSW/bin/loadcalibrationTest`
- `/alma/ACS-4.1/ACSSW/bin/unloadcalibrationTest`
- `/alma/ACS-4.1/ACSSW/bin/loadswitchTest`
- `/alma/ACS-4.1/ACSSW/bin/unloadswitchTest`

Starting up real time components will result in an error message and a non functional component.

Checking the modules out and rebuilding/installing them solves the problem as well (with the appropriate ssh setup). This is the preferred solution, because it is in any case better to rebuild on the target machine all kernel/rtai modules.

Changing the ownership back to `root.root` and `chmod u+s` for those files makes them work again as well.

-- [GianlucaChiozzi](#) - 26 Jul 2005

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