Ibex needs production-quality enhanced PMP (ePMP) with full functional coverage to ensure security.

What is ePMP:

Verifying ePMP steps:

1. Static ePMP configs with mseccfg modes.

2. Random tests while keeping trap handler and code executable, and skipping faulting loads/stores.

3. Directed tests to toggle execute permission in MML mode and execute instructions with each RWX permutation.

PMP coverage with Smeepmp improved from 63% to 98%!