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Trilinos solver updates

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The Epetra stack has been marked as deprecated. We plan to remove these packages in the fall of 2025. **Amesos, AztecOO**, Epetra, EpetraExt, **Ifpack**, Intrepid, Isorropia, **ML**, NewPackage, **Pliris**, PyTrilinos, **ShyLU DDCore**, ThyraEpetraAdapters, ThyraEpetraExtAdapters, Triutils

Amesos2

Yamazaki PR 12524 The interface to SuperLU_DIST now also works for the CUDA-enabled variant of the library. PR 13073 Add interface to MKL cluster sparse solver.

Belos & Anasazi

Thornquist PR 12792 Handling of NaNs
PR 11837 WIP: Integration of serial dense matrix traits in Belos to enable use of Teuchos/Kokkos
objects

Brunini PR 13469 Use a pooling strategy for Tpetra MultiVectors

Ifpack2

Liegeois PR 12344 Schur complement approach for BlockTriDiag solver

Yamazaki PR 12728 BlockRelaxation can now generate blocks using a Zoltan2.

Foucar PR 12911 RBILUK now supports Kokkos Kernels as a backend



MueLu

Glusa PR 12142 The Maxwell solver (RefMaxwell) now also works for grad-div / Darcy flow problems. PR 12720, PR 12740 Removal of pre-Kokkos code, *_kokkos factories deprecated.

NOX

Pawlowski PR 12986 Added preconditioner reuse across multiple nonlinear solves.

Teko

Phillips PR 12675 Block Jacobi and Gauss-Seidel methods allow now to specify preconditioners for the iterative solves of the diagonal blocks.
 PR 13040 Add Hierarchical Block Gauss-Seidel Capability

Solver talks at TUG

- Ichitaro Yamazaki on ShyLU_Node, right now
- Max Firmbach, "Multiphysics Usage of Trilinos", Wed 8am
- Malachi Phillips, "Recent Teko Usage in Aria", Wed 10:15am
- Heidi Thornquist, "Belos Serial Dense Matrix Abstraction", Thu 10:45am