

----- PETSc Performance Summary: -----

./axb2para\_v5 on a linux-gnu named beta with 8 processors, by bogdan Thu Nov 10 17:31:59 2011  
Using Petsc Release Version 3.2.0, Patch 3, Fri Sep 30 10:28:33 CDT 2011

	Max	Max/Min	Avg	Total
Time (sec):	6.688e+01	1.00000	6.688e+01	
Objects:	3.800e+01	1.00000	3.800e+01	
Flops:	1.895e+05	1.23482	1.756e+05	1.405e+06
Flops/sec:	2.834e+03	1.23482	2.626e+03	2.101e+04
Memory:	6.136e+06	1.02845		4.861e+07
MPI Messages:	3.700e+01	2.46667	2.075e+01	1.660e+02
MPI Message Lengths:	4.327e+06	6.46664	5.553e+04	9.218e+06
MPI Reductions:	1.370e+02	1.00000		

Flop counting convention: 1 flop = 1 real number operation of type (multiply/divide/add/subtract)  
e.g., VecAXPY() for real vectors of length N --> 2N flops  
and VecAXPY() for complex vectors of length N --> 8N flops

Summary of Stages:	Time	Flops	Messages	Message Lengths	Reductions
	Avg	%Total	Avg	%Total	counts
%Total					
0: Main Stage:	6.6883e+01	100.0%	1.4052e+06	100.0%	1.660e+02
99.3%					1.360e+02

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See the 'Profiling' chapter of the users' manual for details on interpreting output.

Phase summary info:

Count: number of times phase was executed

Time and Flops: Max - maximum over all processors

Ratio - ratio of maximum to minimum over all processors

Mess: number of messages sent

Avg. len: average message length

Reduct: number of global reductions

Global: entire computation

Stage: stages of a computation. Set stages with PetscLogStagePush() and PetscLogStagePop().

%T - percent time in this phase %f - percent flops in this phase

%M - percent messages in this phase %L - percent message lengths in this phase

%R - percent reductions in this phase

Total Mflop/s: 10e-6 \* (sum of flops over all processors)/(max time over all processors)

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#####
#
#           WARNING!!!
#
# This code was compiled with a debugging option,
# To get timing results run ./configure
# using --with-debugging=no, the performance will
# be generally two or three times faster.
#
#####
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Event	Count	Time (sec)	Flops	Global	Stage							
Total	Max	Ratio	Max	Ratio	Mess	Avg len	Reduct	%T	%f	%M	%L	%R
Mflop/s												
-----												
--- Event Stage 0: Main Stage												
MatSolve	2	1.0	2.8762e-01	1.0	0.00e+00	0.0	0.0e+00	0.0e+00	0.0e+00	0	0	0
0												
MatLUFactorSym	1	1.0	1.2517e-04	1.4	0.00e+00	0.0	0.0e+00	0.0e+00	0.0e+00	0	0	0
0												
MatLUFactorNum	1	1.0	6.6452e+01	1.0	0.00e+00	0.0	0.0e+00	0.0e+00	0.0e+00	99	0	0
0												
MatScale	1	1.0	8.4879e-03	1.2	1.90e+05	1.2	0.0e+00	0.0e+00	2.0e+00	0	100	0
166												
MatAssemblyBegin	3	1.0	1.7607e-02	2.8	0.00e+00	0.0	0.0e+00	0.0e+00	6.0e+00	0	0	4
0												
MatAssemblyEnd	3	1.0	1.7734e-02	1.1	0.00e+00	0.0	9.6e+01	7.9e+03	4.8e+01	0	58	8
0												
MatGetRow	21180	1.0	4.5118e-03	1.3	0.00e+00	0.0	0.0e+00	0.0e+00	0.0e+00	0	0	0
0												
MatLoad	2	1.0	5.5690e-02	1.0	0.00e+00	0.0	9.4e+01	9.4e+04	3.8e+01	0	57	96
0												
MatView	4	1.0	3.1163e-02	3.4	0.00e+00	0.0	0.0e+00	0.0e+00	4.0e+00	0	0	3
0												
MatAXPY	1	1.0	2.2272e-02	1.0	0.00e+00	0.0	4.4e+01	8.6e+03	3.0e+01	0	27	4
0												
VecCopy	2	1.0	1.1396e-04	1.2	0.00e+00	0.0	0.0e+00	0.0e+00	0.0e+00	0	0	0

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0
VecSet                2 1.0 1.2112e-04 1.7 0.00e+00 0.0 0.0e+00 0.0e+00 0.0e+00 0 0 0 0 0 0 0 0 0 0
0
VecAssemblyBegin      2 1.0 4.6206e-04 1.1 0.00e+00 0.0 2.8e+01 1.0e+01 6.0e+00 0 0 17 0 4 0 0 17 0 4
0
VecAssemblyEnd        2 1.0 2.7180e-05 4.6 0.00e+00 0.0 0.0e+00 0.0e+00 0.0e+00 0 0 0 0 0 0 0 0 0 0
0
KSPSetup              1 1.0 4.0531e-06 4.2 0.00e+00 0.0 0.0e+00 0.0e+00 0.0e+00 0 0 0 0 0 0 0 0 0 0
0
KSPSolve              2 1.0 6.6742e+01 1.0 0.00e+00 0.0 0.0e+00 0.0e+00 2.2e+01100 0 0 0 16 100 0 0 0 16
0
PCSetUp              1 1.0 6.6453e+01 1.0 0.00e+00 0.0 0.0e+00 0.0e+00 1.4e+01 99 0 0 0 10 99 0 0 0 10
0
PCApply              2 1.0 2.8763e-01 1.0 0.00e+00 0.0 0.0e+00 0.0e+00 0.0e+00 0 0 0 0 0 0 0 0 0 0
0
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Memory usage is given in bytes:

Object Type            Creations    Destructions        Memory    Descendants' Mem.  
Reports information only for process 0.

--- Event Stage 0: Main Stage

Object Type	Creations	Destructions	Memory	Descendants' Mem.
Viewer	3	2	1424	0
Matrix	12	12	5809964	0
Vector	10	10	1111520	0
Vector Scatter	3	3	3084	0
Index Set	8	8	5848	0
Krylov Solver	1	1	1064	0
Preconditioner	1	1	960	0

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Average time to get PetscTime(): 9.53674e-08
Average time for MPI_Barrier(): 3.00407e-06
Average time for zero size MPI_Send(): 0.000155866
#PETSc Option Table entries:

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-A A_Uc_25.dat
-E E_Uc_25.dat
-ksp_type preonly
-log_summary
-ndim 84719
-pc_factor_mat_solver_package superlu_dist
-pc_type lu
#End of PETSc Option Table entries
Compiled with FORTRAN kernels
Compiled with full precision matrices (default)
sizeof(short) 2 sizeof(int) 4 sizeof(long) 8 sizeof(void*) 8 sizeof(PetscScalar) 16
Configure run at: Mon Oct 17 10:59:49 2011
Configure options: --with-debugging=1 --with-clanguage=c --with-mpi-dir=/usr/lib64/mpich2 --with-shared-
libraries=1 --with-scalar-type=complex --with-fortran-kernels=1 --download-superlu=yes --download-mumps=yes
--download-scalapack=yes --download-superlu_dist=yes --download-blacs=yes --download-f-blas-lapack=yes --download-
lapack=yes --download-parmetis=yes

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Libraries compiled on Mon Oct 17 10:59:49 2011 on tau
Machine characteristics: Linux-2.6.35.14-97.fc14.x86_64-x86_64-with-fedora-14-Laughlin
Using PETSc directory: /usr/local/x-petsc
Using PETSc arch: linux-gnu-c-debug
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Using C compiler: /usr/lib64/mpich2/bin/mpicc -fPIC -Wall -Wwrite-strings -Wno-strict-aliasing -Wno-unknown-
pragmas -g3 ${COPTFLAGS} ${CFLAGS}
Using Fortran compiler: /usr/lib64/mpich2/bin/mpif90 -fPIC -Wall -Wno-unused-variable -Wno-line-truncation -g $
${FOPTFLAGS} ${FFLAGS}
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Using include paths: -I/usr/local/x-petsc/linux-gnu-c-debug/include -I/usr/local/x-petsc/include -I/usr/local/x-
petsc/include -I/usr/local/x-petsc/linux-gnu-c-debug/include -I/usr/lib64/mpich2/include -I/usr/include/mpich2-
x86_64
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Using C linker: /usr/lib64/mpich2/bin/mpicc
Using Fortran linker: /usr/lib64/mpich2/bin/mpif90
Using libraries: -Wl,-rpath,/usr/local/x-petsc/linux-gnu-c-debug/lib -L/usr/local/x-petsc/linux-gnu-c-debug/lib
-lpetsc -lX11 -Wl,-rpath,/usr/local/x-petsc/linux-gnu-c-debug/lib -L/usr/local/x-petsc/linux-gnu-c-debug/lib
-lsuperlu_dist_2.5 -lcmumps -ldmumps -lsmumps -lzmumps -lmumps_common -lpord -lparmetis -lmetis -lpthread
-lsuperlu_4.2 -lPLAPACK -lscalapack -lblacs -lflapack -lfbblas -lm -Wl,-rpath,/usr/lib64/mpich2/lib
-L/usr/lib64/mpich2/lib -Wl,-rpath,/usr/lib/gcc/x86_64-redhat-linux/4.5.1 -L/usr/lib/gcc/x86_64-redhat-linux/4.5.1
-ldl -lmpich -lopa -lpthread -lrt -lgcc_s -lmpich90 -lgfortran -lm -lm -ldl -lmpich -lopa -lpthread -lrt -lgcc_s
-ldl

```