

# List of Configurations

- **Storm.lp** – LP with non-triv bounds using gurobi (1 thread)  
Occurrences: appendix/Figure 12 (LP)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-glpk-nobnds** – LP using glpk  
Occurrences: Figure 3 (GLPK<sub>s</sub>), appendix/Figure 13 (GLPK<sub>s</sub>)  
Command: `storm ... --minmax:method lp --lpsolver glpk`
- **Storm.lp-gurobi-16autonobnds** – LP using gurobi (16 threads)  
Occurrences: appendix/Figure 10 (16), appendix/Figure 10 (Gurobi<sub>s</sub>/16)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 16`
- **Storm.lp-gurobi-4auto** – LP with non-triv bounds using gurobi (4 threads)  
Occurrences: Figure 4 (bounds/all/ineq), Figure 4 (bounds/all/ineq), appendix/Figure 11 (Gurobi<sub>s</sub>/bounds), appendix/Figure 11 (Gurobi<sub>s</sub>/bounds/all)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 4 --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-gurobi-4autoeq** – LP with non-triv bounds using gurobi (4 threads), eq. constr  
Occurrences: Figure 4 (bounds/all/eq), appendix/Figure 11 (Gurobi<sub>s</sub>/bounds/all/eq)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 4 --minmax:lp-eq-unique-actions --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-gurobi-4autoinit** – LP with non-triv bounds using gurobi (4 threads), only init opt.  
Occurrences: Figure 4 (bounds/init/ineq), Figure 4 (bounds/init/ineq), appendix/Figure 11 (Gurobi<sub>s</sub>/bounds/init)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 4 --minmax:lp-objective-type onlyinitial --topological:relevant-values --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-gurobi-4autoiniteq** – LP with non-triv bounds using gurobi (4 threads), only init opt., eq. constr  
Occurrences: Figure 4 (bounds/init/eq), appendix/Figure 11 (Gurobi<sub>s</sub>/bounds/init/eq)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 4 --minmax:lp-objective-type onlyinitial --topological:relevant-values --minmax:lp-eq-unique-actions --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-gurobi-4autonobnds** – LP using gurobi (4 threads)  
Occurrences: Figure 4 (simple/all/ineq), appendix/Figure 9 (auto), appendix/Figure 9 (Gurobi<sub>s</sub>/auto), appendix/Figure 9 (Gurobi<sub>s</sub>/auto), appendix/Figure 9 (Gurobi<sub>s</sub>/auto), appendix/Figure 10 (4), appendix/Figure 10 (Gurobi<sub>s</sub>/4), appendix/Figure 10 (Gurobi<sub>s</sub>/4), appendix/Figure 11 (Gurobi<sub>s</sub>/no bounds)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 4`
- **Storm.lp-gurobi-4barriernobnds** – LP using gurobi (4 threads, barrier)  
Occurrences: appendix/Figure 9 (barrier), appendix/Figure 9 (Gurobi<sub>s</sub>/barrier)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 4 --gurobi:method barrier`
- **Storm.lp-gurobi-4dualsimplnobnds** – LP using gurobi (4 threads, dualsimpl)  
Occurrences: appendix/Figure 9 (dual), appendix/Figure 9 (Gurobi<sub>s</sub>/dual simplex)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 4 --gurobi:method dual-simplex`
- **Storm.lp-gurobi-4primalsimplnobnds** – LP using gurobi (4 threads, primalsimpl)  
Occurrences: appendix/Figure 9 (prim), appendix/Figure 9 (Gurobi<sub>s</sub>/primal simplex)  
Command: `storm ... --minmax:method lp --lpsolver gurobi --gurobi:threads 4 --gurobi:method primal-simplex`
- **Storm.lp-mecq** – LP with non-triv bounds using Gurobi, MEC Quotient  
Occurrences: appendix/Figure 12 (LP-mec)  
Command: `storm ... --minmax:method lp --force-require-unique --lpsolver gurobi --minmax:lp-use-nontrivial-bounds`

- **Storm.lp-mecq-topo** – LP with non-triv bounds using Gurobi, topological solving, MEC Quotient  
Occurrences: appendix/Figure 12 (LP-mec-topo), appendix/Figure 13 (Gurobi<sub>s</sub>)  
Command: `storm ... --minmax:method topological --topological:minmax lp --force-require-unique --lpsolver gurobi --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-mecq-topo-glpk** – LP with non-triv bounds using glpk, topological solving, MEC Quotient  
Occurrences: appendix/Figure 13 (GLPK<sub>s</sub>)  
Command: `storm ... --minmax:method topological --topological:minmax lp --force-require-unique --lpsolver glpk --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-mecq-topo-gurobi-4auto** – LP with non-triv bounds using gurobi (4 threads), topological solving, MEC Quotient  
Occurrences: Figure 5 (LP), Figure 6c (LP), Figure 7 (LP), Figure 8 (LP)  
Command: `storm ... --minmax:method topological --topological:minmax lp --force-require-unique --lpsolver gurobi --gurobi:threads 4 --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-mecq-topo-soplex** – LP with non-triv bounds using soplex (inexact), topological solving, MEC Quotient  
Occurrences: appendix/Figure 13 (SoPlex<sub>s</sub>)  
Command: `storm ... --minmax:method topological --topological:minmax lp --force-require-unique --lpsolver soplex --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-mecq-topo-soplex-exact** – LP with non-triv bounds using soplex (exact), topological solving, MEC Quotient  
Occurrences: Figure 5 (LP/SoPlex<sup>X</sup>), Figure 7 (LP/SoPlex<sup>X</sup>), Figure 8 (LP/SoPlex<sup>X</sup>), appendix/Figure 13 (SoPlex<sub>s</sub><sup>X</sup>)  
Command: `storm ... --minmax:method topological --topological:minmax lp --force-require-unique --lpsolver soplex --exact --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-mecq-topo-z3-exact** – LP with non-triv bounds using z3 (exact), topological solving, MEC Quotient  
Occurrences: Figure 5 (LP/Z3<sup>X</sup>), Figure 7 (LP/Z3<sup>X</sup>), Figure 8 (LP/Z3<sup>X</sup>), appendix/Figure 13 (Z3<sub>s</sub><sup>X</sup>)  
Command: `storm ... --minmax:method topological --topological:minmax lp --force-require-unique --lpsolver z3 --exact --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-nobnds** – LP using Gurobi (1 thread)  
Occurrences: Figure 3 (Gurobi<sub>s</sub>), appendix/Figure 10 (1), appendix/Figure 10 (Gurobi<sub>s</sub>/1), appendix/Figure 13 (Gurobi<sub>s</sub>)  
Command: `storm ... --minmax:method lp --lpsolver gurobi`
- **Storm.lp-soplex-exactnobnds** – LP using soplex (exact)  
Occurrences: Figure 3 (SoPlex<sub>s</sub><sup>X</sup>), appendix/Figure 13 (SoPlex<sub>s</sub><sup>X</sup>)  
Command: `storm ... --minmax:method lp --lpsolver soplex --exact`
- **Storm.lp-soplex-nobnds** – LP using soplex (inexact)  
Occurrences: Figure 3 (SoPlex<sub>s</sub>), appendix/Figure 13 (SoPlex<sub>s</sub>)  
Command: `storm ... --minmax:method lp --lpsolver soplex`
- **Storm.lp-topo** – LP with non-triv bounds using gurobi (1 thread), topological solving  
Occurrences: appendix/Figure 12 (LP-topo)  
Command: `storm ... --minmax:method topological --topological:minmax lp --lpsolver gurobi --minmax:lp-use-nontrivial-bounds`
- **Storm.lp-z3-exactnobnds** – LP using z3 (exact)  
Occurrences: Figure 3 (Z3<sub>s</sub><sup>X</sup>), appendix/Figure 13 (Z3<sub>s</sub><sup>X</sup>)  
Command: `storm ... --minmax:method lp --lpsolver z3 --exact`
- **Storm.oivi-topo** – Optimistic VI, topological solving  
Occurrences: Figure 5 (OVI), Figure 6a (OVI), Figure 6b (OVI), Figure 6c (OVI), Figure 7 (OVI), Figure 8 (OVI)  
Command: `storm ... --minmax:method topological --topological:minmax ovi --sound`
- **Storm.pi** – PI with GMRES as LinEqSolver  
Occurrences: Unnamed figure on page 13 (PI/gmres), appendix/Figure 12 (PI)  
Command: `storm ... --minmax:method pi`
- **Storm.pi-exactlu** – PI with LU as LinEqSolver (exact)  
Occurrences: Unnamed figure on page 13 (PI/LU<sup>X</sup>)  
Command: `storm ... --minmax:method pi --exact`

- **Storm.pi-lu** – PI with LU as LinEqSolver (inexact)  
Occurrences: Unnamed figure on page 13 (PI/LU)  
Command: `storm ... --minmax:method pi --eqsolver eigen --eigen:method sparselu`
- **Storm.pi-mecq** – PI with GMRES as LinEqSolver, MEC Quotient  
Occurrences: appendix/Figure 12 (PI-mec)  
Command: `storm ... --minmax:method pi --force-require-unique`
- **Storm.pi-mecq-topo** – PI with GMRES as LinEqSolver, topological solving, MEC Quotient  
Occurrences: Figure 5 (PI), Figure 7 (PI), Figure 8 (PI), appendix/Figure 12 (PI-mec-topo)  
Command: `storm ... --minmax:method topological --topological:minmax pi --force-require-unique`
- **Storm.pi-mecq-topo-exactlu** – PI with LU as LinEqSolver (exact), topological solving, MEC Quotient  
Occurrences: Figure 5 (PI/LU<sup>X</sup>), Figure 7 (PI/LU<sup>X</sup>), Figure 8 (PI/LU<sup>X</sup>)  
Command: `storm ... --minmax:method topological --topological:minmax pi --force-require-unique --exact`
- **Storm.pi-ovi** – PI with OVI as LinEqSolver  
Occurrences: Unnamed figure on page 13 (PI/OVI)  
Command: `storm ... --minmax:method pi --eqsolver native --native:method ovi --sound`
- **Storm.pi-topo** – PI with GMRES as LinEqSolver, topological solving  
Occurrences: appendix/Figure 12 (PI-topo)  
Command: `storm ... --minmax:method topological --topological:minmax pi`
- **Storm.pi-vi** – PI with VI as LinEqSolver  
Occurrences: Unnamed figure on page 13 (PI/VI)  
Command: `storm ... --minmax:method pi --eqsolver native --native:method power`
- **Storm.rs-mecq-topo-exact** – RationalSearch (exact), topological solving, MEC Quotient  
Occurrences: Figure 5 (RS<sup>X</sup>), Figure 7 (RS<sup>X</sup>), Figure 8 (RS<sup>X</sup>)  
Command: `storm ... --minmax:method topological --topological:minmax rs --force-require-unique --exact`
- **Storm.vi** – Classical VI  
Occurrences: Figure 3 (VI<sub>s</sub>), appendix/Figure 12 (VI), appendix/Figure 13 (VI<sub>s</sub>)  
Command: `storm ... --minmax:method vi`
- **Storm.vi-mecq** – Classical VI, MEC Quotient  
Occurrences: appendix/Figure 12 (VI-mec)  
Command: `storm ... --minmax:method vi --force-require-unique`
- **Storm.vi-mecq-topo** – Classical VI, topological solving, MEC Quotient  
Occurrences: Figure 5 (VI), Figure 7 (VI), Figure 8 (VI), appendix/Figure 12 (VI-mec-topo), appendix/Figure 13 (VI<sub>s</sub>)  
Command: `storm ... --minmax:method topological --topological:minmax vi --force-require-unique`
- **Storm.vi-topo** – Classical VI, topological solving  
Occurrences: appendix/Figure 12 (VI-topo)  
Command: `storm ... --minmax:method topological --topological:minmax vi`
- **Storm.vi2lp-mecq-topo-gurobi** – LP with non-triv bounds and VI warm-start using Gurobi (1 thread), topological solving, MEC Quotient  
Occurrences: Figure 5 (VI2LP), Figure 7 (VI2LP), Figure 8 (VI2LP)  
Command: `storm ... --minmax:method topological --topological:minmax vi-to-lp --lpsolver gurobi --minmax:lp-use-nontrivial-bounds --force-require-unique`
- **Storm.vi2lp-mecq-topo-soplex-exact** – LP with non-triv bounds and VI warm-start using soplex (exact), topological solving, MEC Quotient  
Occurrences: Figure 5 (VI2LP/SoPlex<sup>X</sup>), Figure 7 (VI2LP/SoPlex<sup>X</sup>), Figure 8 (VI2LP/SoPlex<sup>X</sup>)  
Command: `storm ... --minmax:method topological --topological:minmax vi-to-lp --lpsolver soplex --exact --minmax:lp-use-nontrivial-bounds --force-require-unique`
- **Storm.vi2pi-mecq-topo-exactlu** – PI with LU as LinEqSolver (exact) using VI warm-start, topological solving, MEC Quotient  
Occurrences: Figure 5 (VI2PI/LU<sup>X</sup>), Figure 6a (VI2PI/LU<sup>X</sup>), Figure 6b (VI2PI/LU<sup>X</sup>), Figure 7 (VI2PI/LU<sup>X</sup>), Figure 8 (VI2PI/LU<sup>X</sup>)  
Command: `storm ... --minmax:method topological --topological:minmax vi-to-pi --force-require-unique --exact`

- **Storm.vi2pi-mecq-topo-gmres** – PI with gmres as LinEqSolver using VI warm-start, topological solving, MEC Quotient  
Occurrences: Figure 5 (VI2PI), Figure 7 (VI2PI), Figure 8 (VI2PI)  
Command: `storm ... --minmax:method topological --topological:minmax vi-to-pi --force-require-unique`
- **mcsta.lp-copt-mono** – LP with COpt, monolithical  
Occurrences: Figure 3 (COPT<sub>m</sub>), Figure 3 (COPT<sub>m</sub>), appendix/Figure 13 (COPT<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Copt`
- **mcsta.lp-copt-topo** – LP with COpt, topological  
Occurrences: appendix/Figure 13 (COPT<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Copt --topological`
- **mcsta.lp-cplex-mono** – LP with CPLEX, monolithical  
Occurrences: Figure 3 (CPLEX<sub>m</sub>), appendix/Figure 13 (CPLEX<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Cplex`
- **mcsta.lp-cplex-topo** – LP with CPLEX, topological  
Occurrences: appendix/Figure 13 (CPLEX<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Cplex --topological`
- **mcsta.lp-glop-mono** – LP with Glop, monolithical  
Occurrences: Figure 3 (Glop<sub>m</sub>), appendix/Figure 13 (Glop<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Glop`
- **mcsta.lp-glop-topo** – LP with Glop, topological  
Occurrences: appendix/Figure 13 (Glop<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Glop --topological`
- **mcsta.lp-gurobi-mono** – LP with Gurobi, monolithical  
Occurrences: Figure 3 (Gurobi<sub>m</sub>), Figure 3 (Gurobi<sub>m</sub>), appendix/Figure 13 (Gurobi<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Gurobi`
- **mcsta.lp-gurobi-topo** – LP with Gurobi, topological  
Occurrences: appendix/Figure 13 (Gurobi<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Gurobi --topological`
- **mcsta.lp-highs-mono** – LP with HiGHS, monolithical  
Occurrences: Figure 3 (HiGHS<sub>m</sub>), appendix/Figure 13 (HiGHS<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver HiGHS`
- **mcsta.lp-highs-topo** – LP with HiGHS, topological  
Occurrences: appendix/Figure 13 (HiGHS<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver HiGHS --topological`
- **mcsta.lp-lpsolve-mono** – LP with lp\_solve, monolithical  
Occurrences: Figure 3 (lp\_solve<sub>m</sub>), appendix/Figure 13 (lp\_solve<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver LPSolve`
- **mcsta.lp-lpsolve-topo** – LP with lp\_solve, topological  
Occurrences: appendix/Figure 13 (lp\_solve<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver LPSolve --topological`
- **mcsta.lp-mosek-mono** – LP with Mosek, monolithical  
Occurrences: Figure 3 (Mosek<sub>m</sub>), appendix/Figure 13 (Mosek<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Mosek`
- **mcsta.lp-mosek-topo** – LP with Mosek, topological  
Occurrences: appendix/Figure 13 (Mosek<sub>m</sub>)  
Command: `modest mcsta ... --alg LinearProgramming --lp-solver Mosek --topological`
- **mcsta.vi** – Classical VI  
Occurrences: Figure 3 (VI<sub>m</sub>), appendix/Figure 13 (VI<sub>m</sub>)  
Command: `modest mcsta ... --alg ValueIteration`