

# Process Models

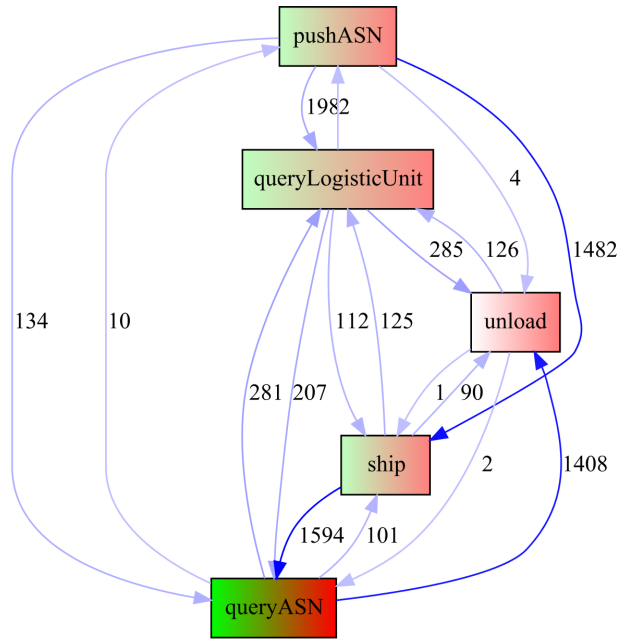


Figure 1: SCM process model with activity-based caseID

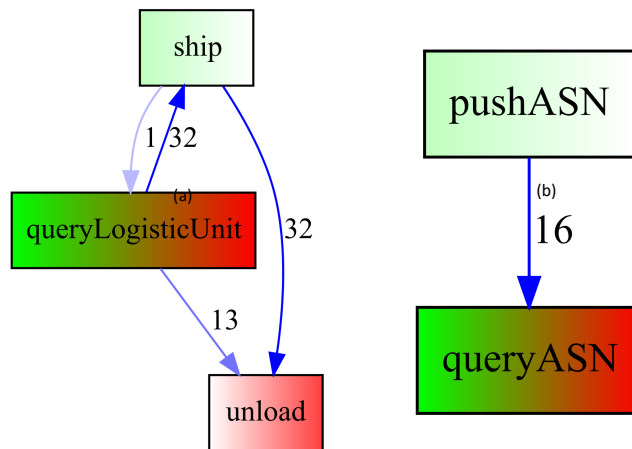


Figure 2: SCM process model with key-based caseID

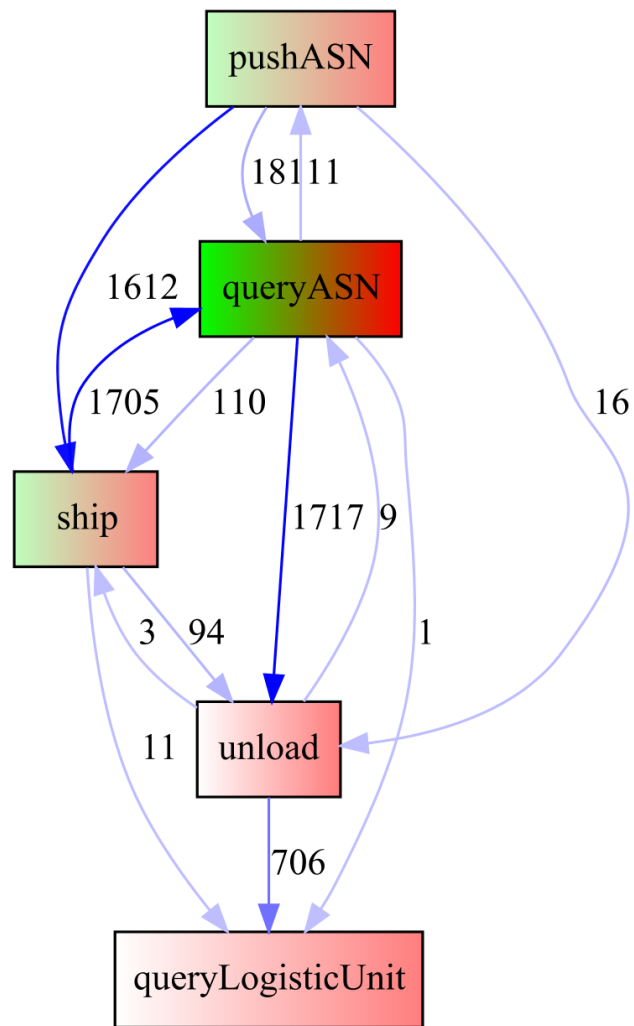


Figure 3: SCM process model after reordering all transactions

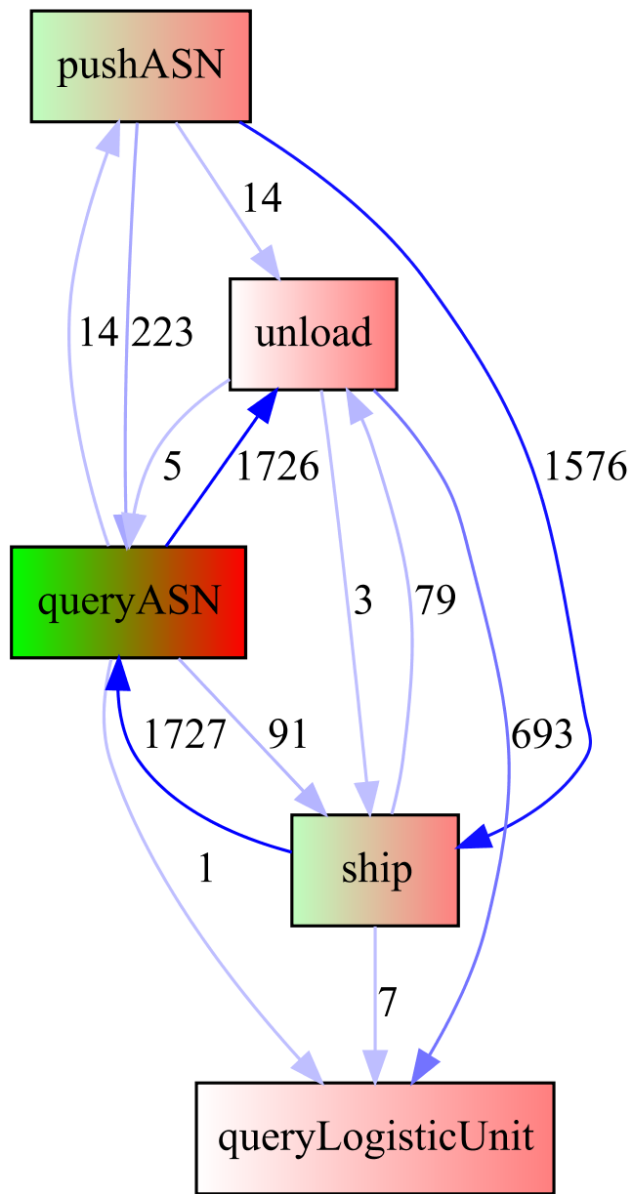


Figure 4: SCM process model after reordering specific transactions

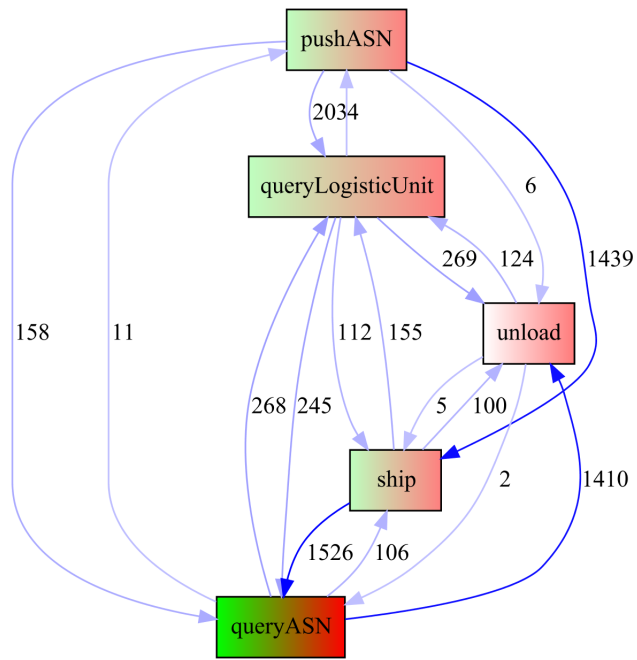


Figure 5: SCM process model after rate control

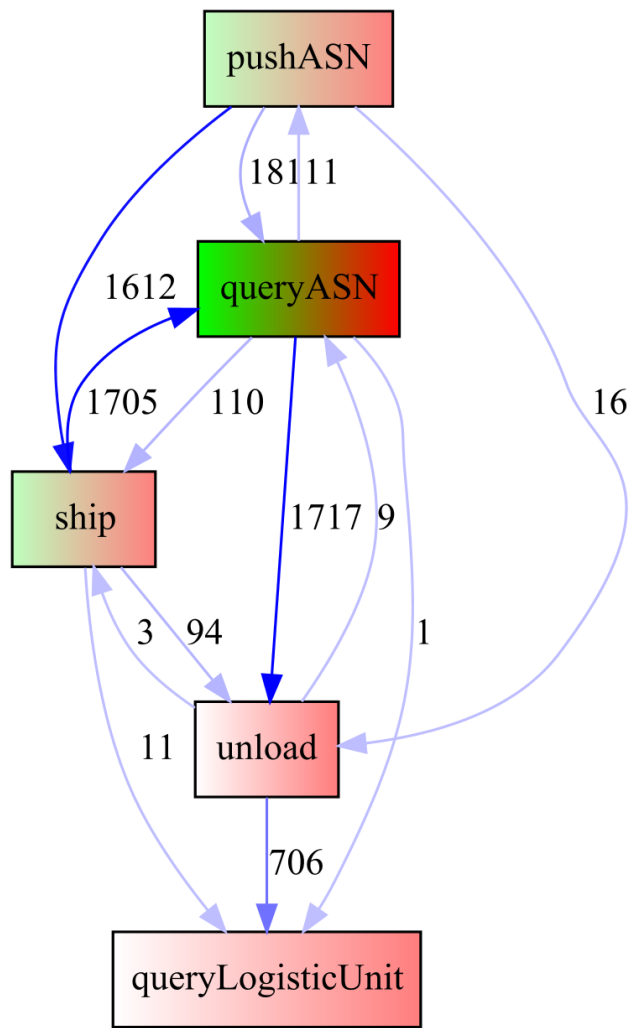


Figure 6: SCM process model after applying all optimizations

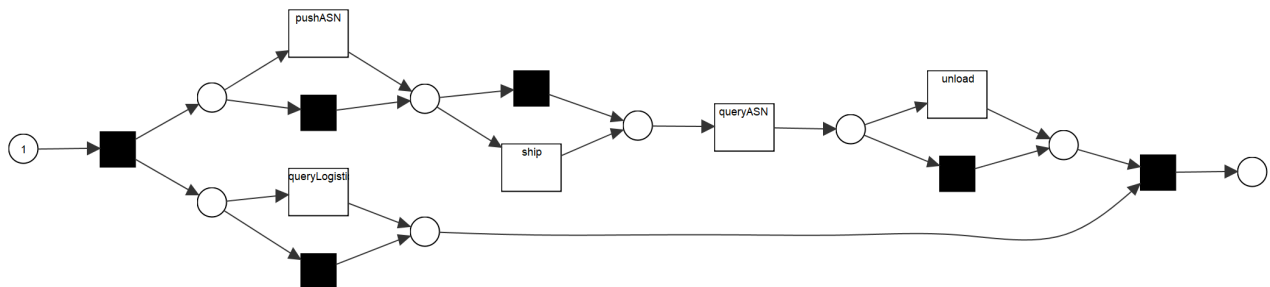
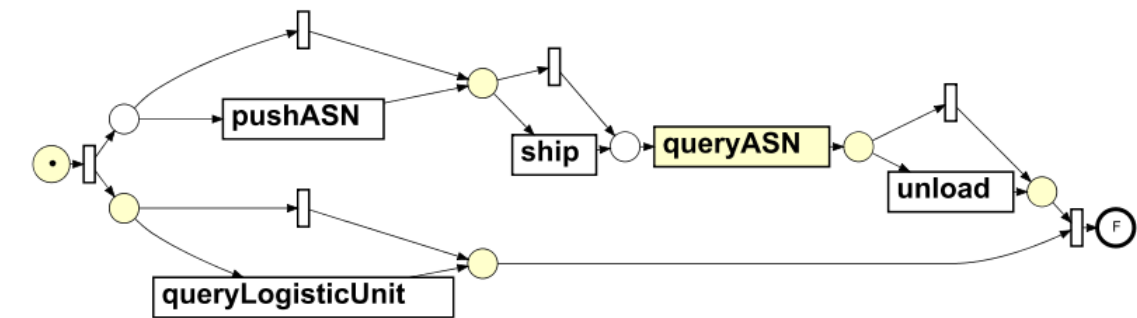
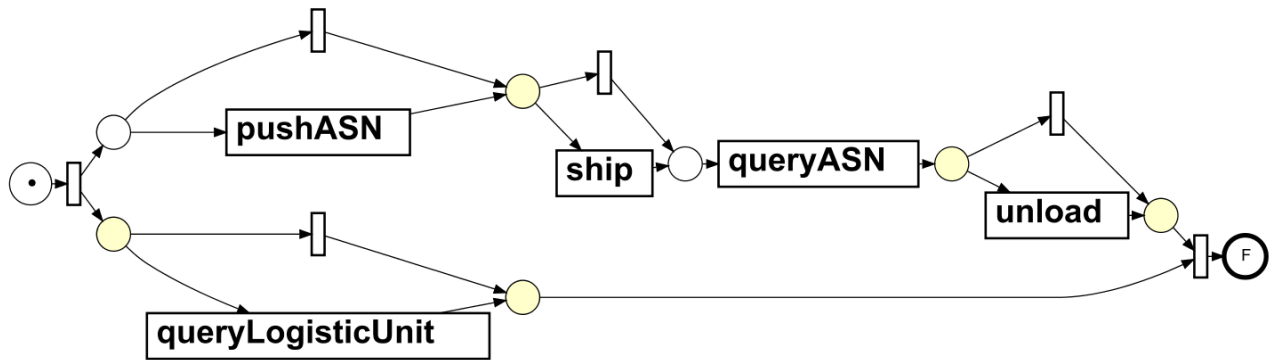


Figure 7: SCM ideal petri net



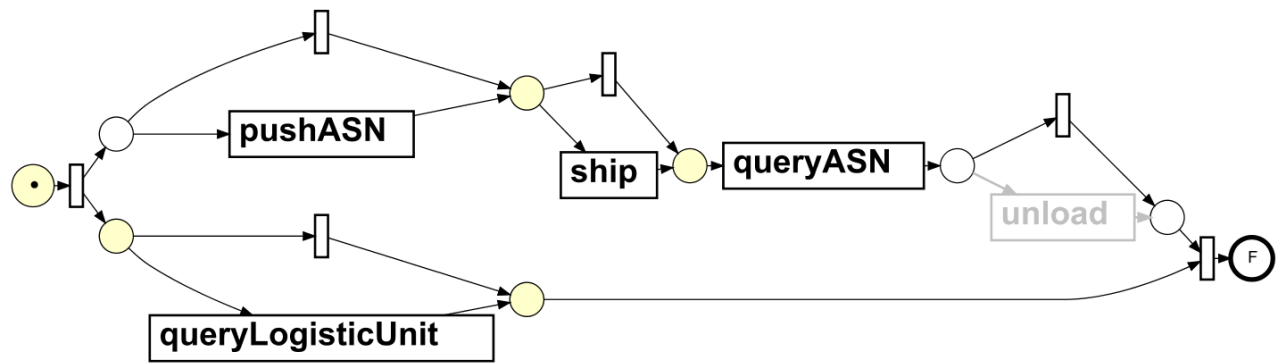
Avg fitness	100%
% Violations	0.2%
% Event Violations	0.2%
% Data Violations	0%
# Correct Events	53,134
# Wrong Events	114
# Missing Events	1

Figure 8: Conformance checking SCM without optimizations



Avg fitness	100%
% Violations	0.2%
% Event Violations	0.2%
% Data Violations	0%
# Correct Events	53,368
# Wrong Events	113
# Missing Events	0

Figure 9: Conformance checking SCM after reordering specific transactions



Avg fitness	99.2%
% Violations	3.4%
% Event Violations	3.4%
% Data Violations	0%
# Correct Events	51,488
# Wrong Events	1,820
# Missing Events	0

Figure 10: Conformance checking SCM after reordering all transactions

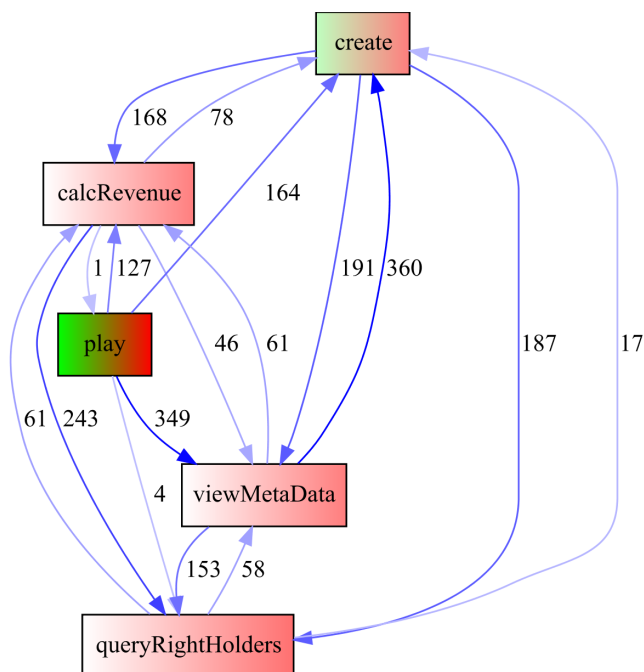


Figure 11: Digital rights management process model

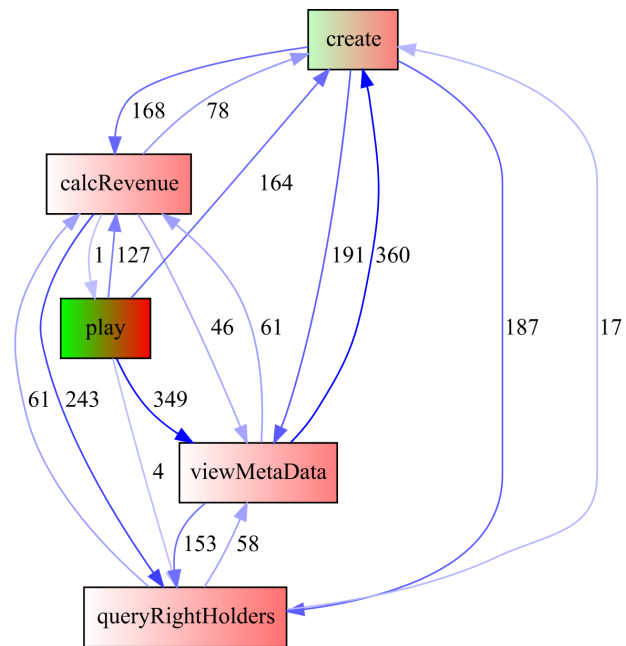


Figure 12: Digital rights management process model after implementing delta-writes



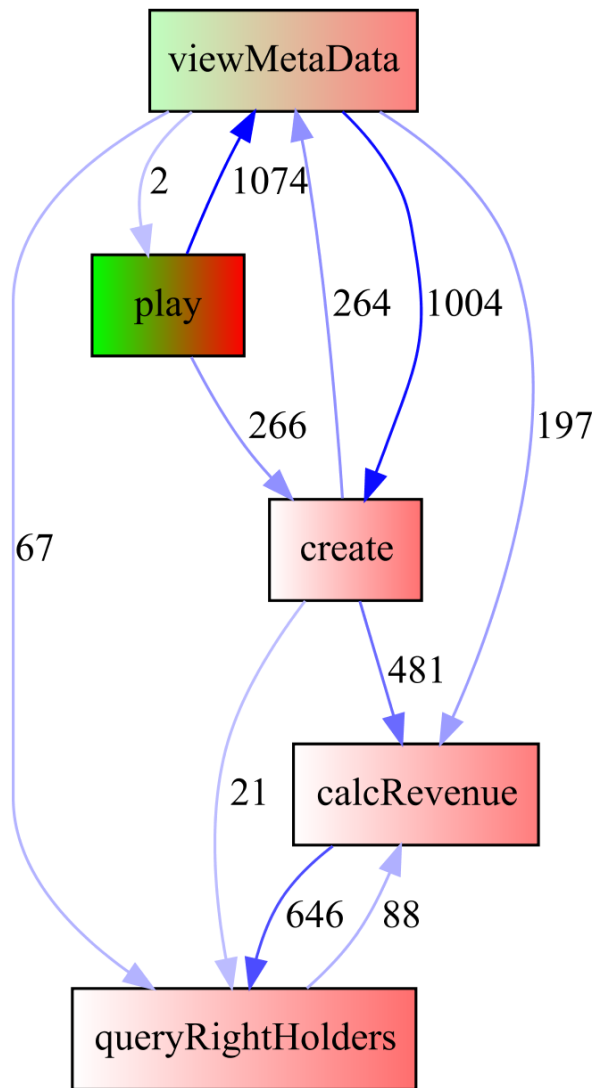


Figure 13: Digital rights management process model after reordering

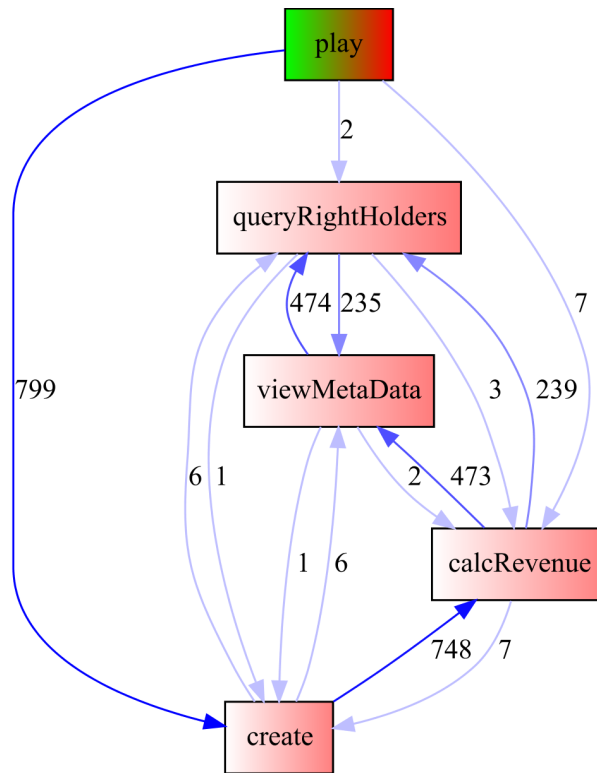


Figure 14: Digital rights management process model after hot key removal

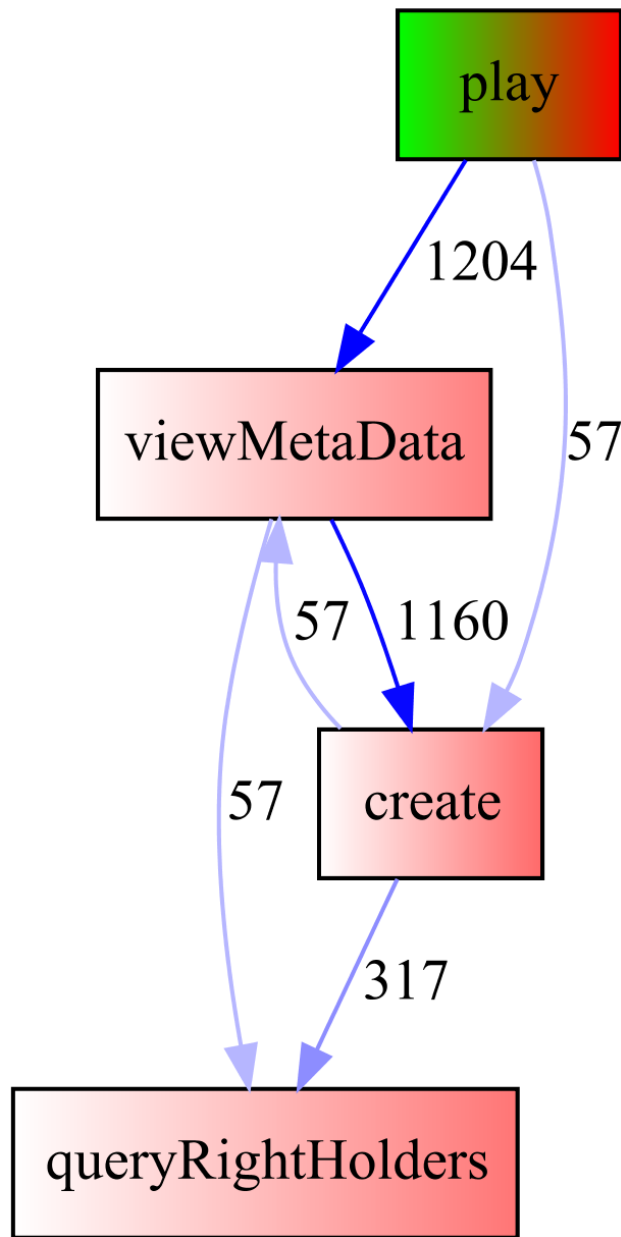


Figure 15: Digital rights management process model after applying all optimizations

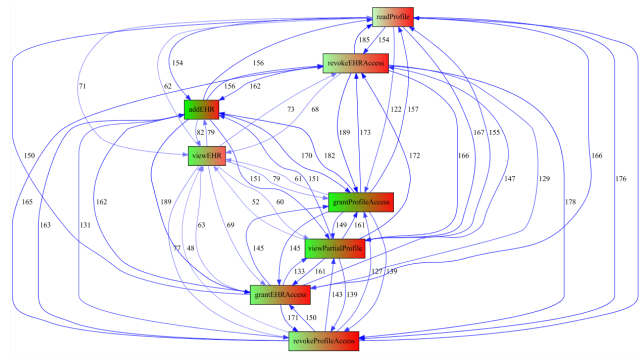


Figure 16: Electronic health record process model

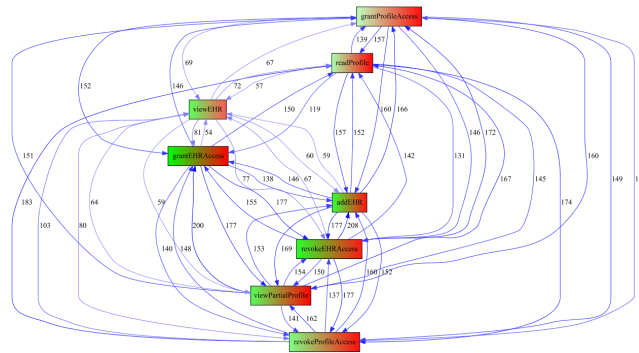
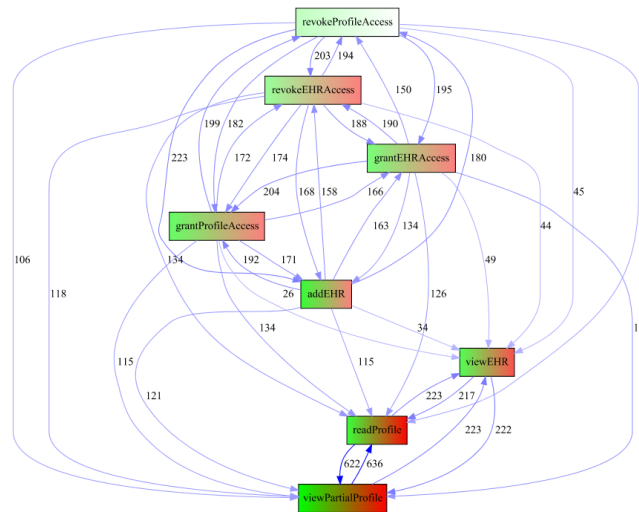
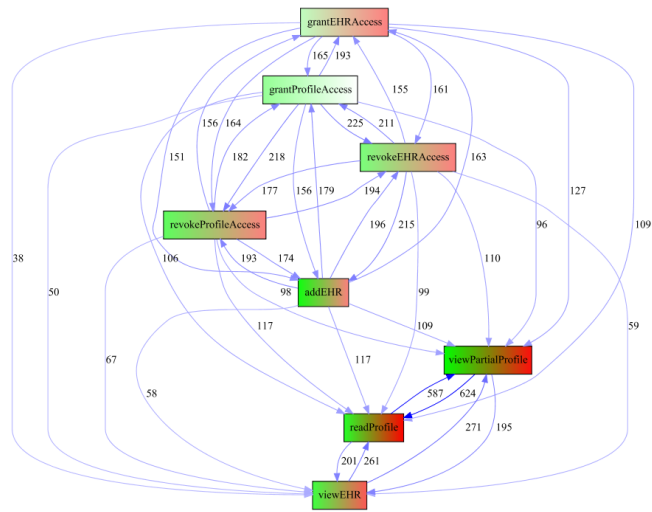


Figure 17: Electronic health record process model after rate control





**Figure 19: Electronic health record process model after applying all optimizations**

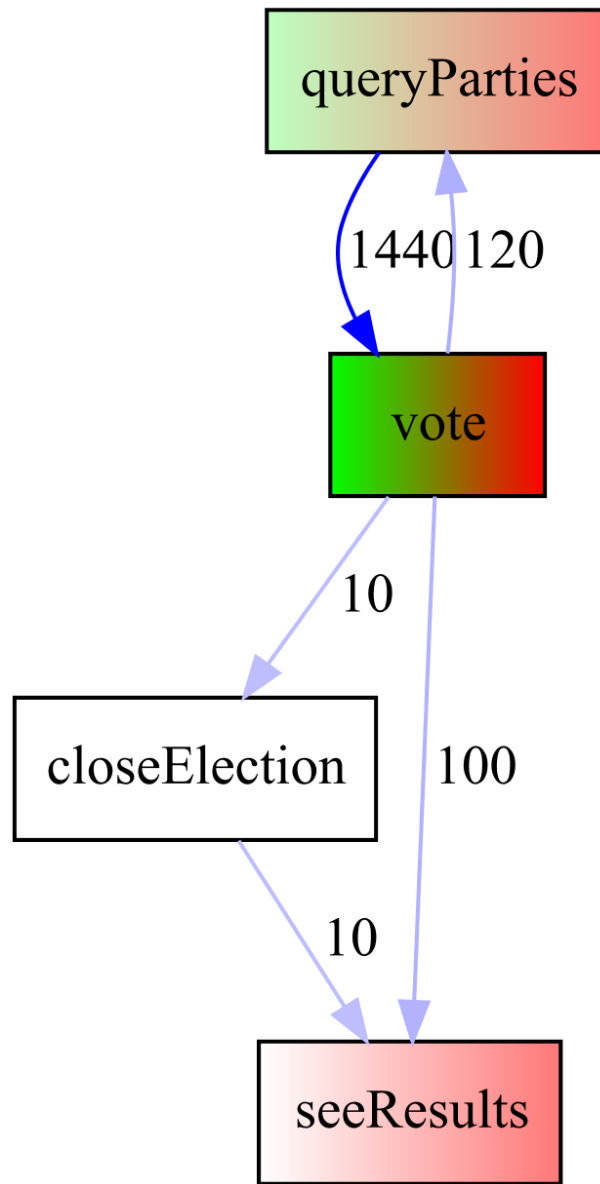


Figure 20: Digital voting process model

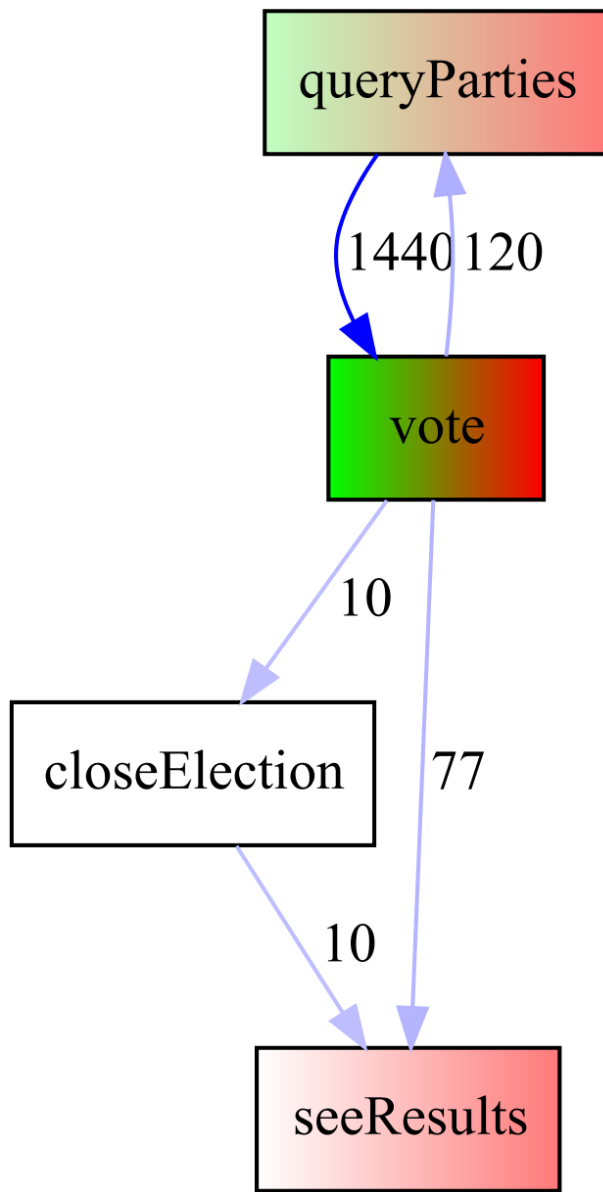


Figure 21: Digital voting process model after rate control

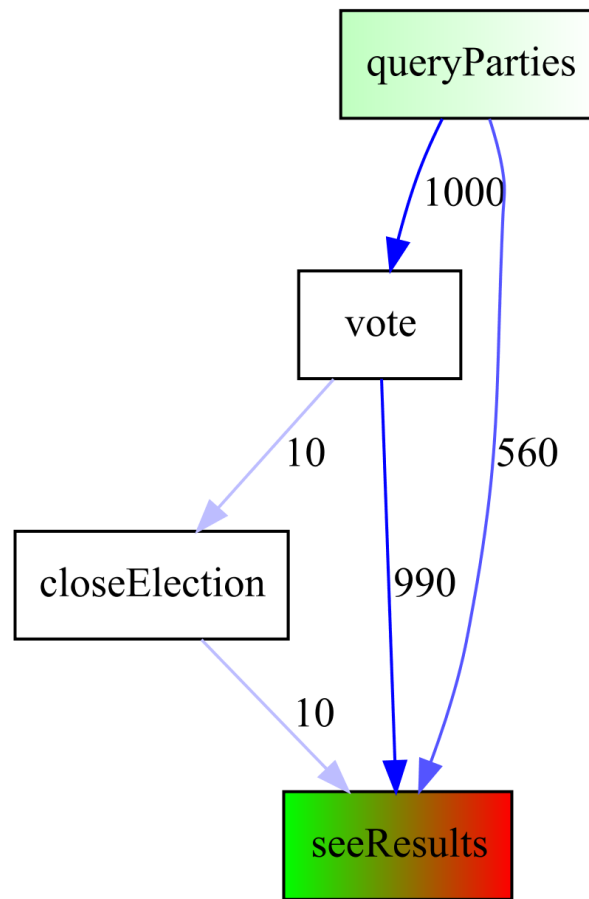


Figure 22: Digital voting process model after hot key removal



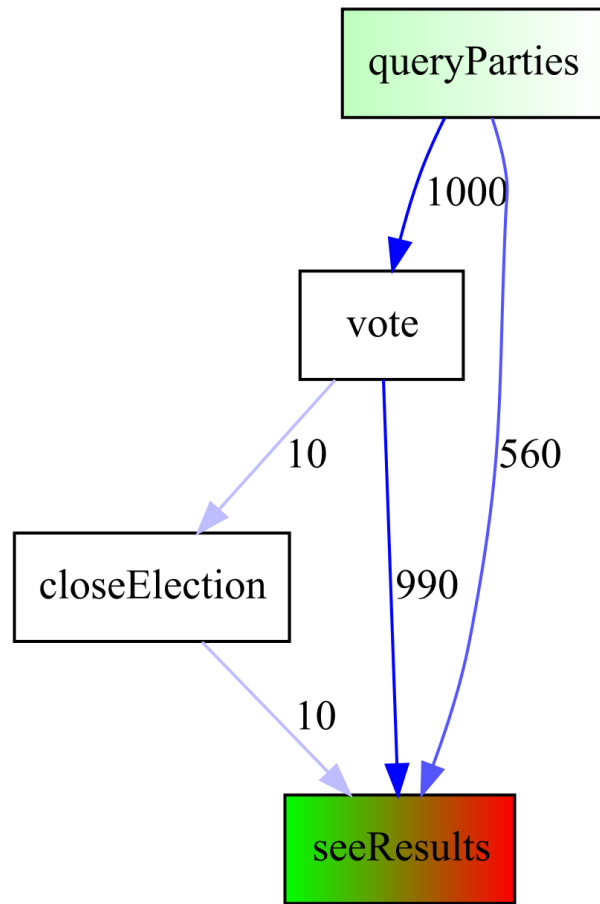


Figure 23: Digital voting process model after applying all optimizations

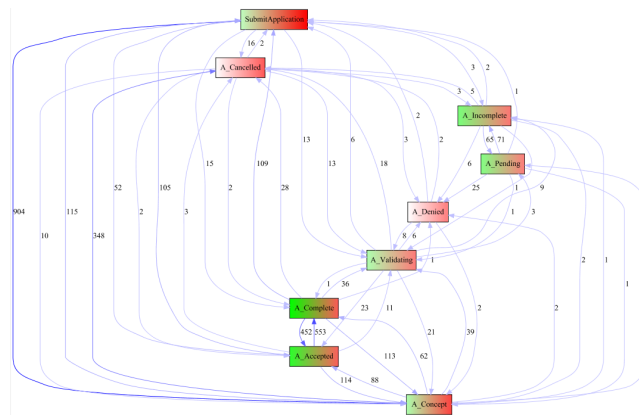


Figure 24: Loan application process model

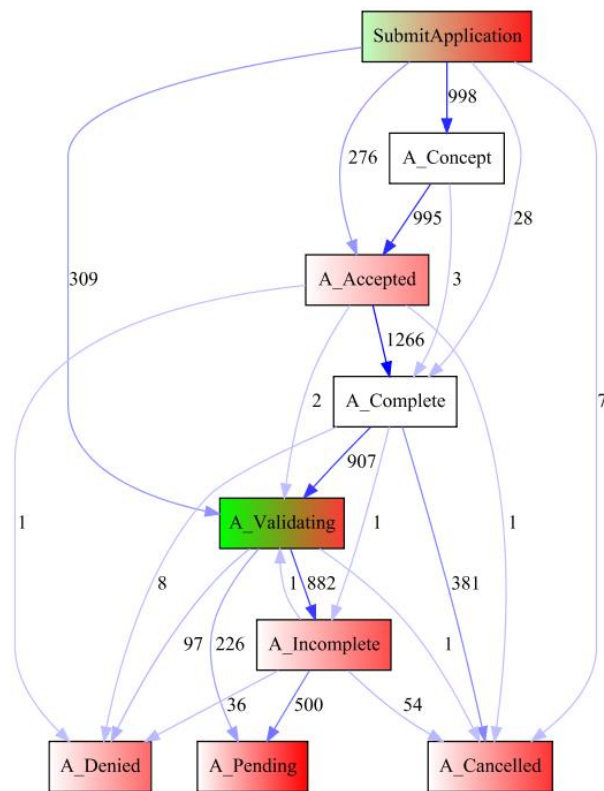


Figure 25: Loan application process model after hotkey removal