Synthesized solution for benchmark Olsendrecv.c

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solution
                                _ (Partial), cond d_{30}: c > 0
                                                                                                                               k_1 = (a_8 \cdot V_b = \text{recv}(); \cdot (c_{15} \cdot E_{\text{auth}} = \text{check(b)}; \cdot (b_{12} \cdot C_n = \text{constructReply}(); \cdot S() = \text{send(n)}; + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I() = \log(b); \cdot X_x = x - i,? 1;) * \neg a_8 \\ k_2 = (a_{22} \cdot V_b = \text{recv}(); \cdot (d_{30} \cdot L() = \log(b); + \neg d_{30} \cdot 1) \cdot (c_{28} \cdot C_n = \text{constructReply}(); \cdot S() = \text{send(n)}; \cdot (d_{25} \cdot G() = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_x = x - i,? 1;) * \neg a_{22} \cdot I_x + \neg a_{23} \cdot I_y + \neg a_{24} \cdot I_y + \neg a_{24} \cdot I_y + \neg a_{25} \cdot I_y + \neg a
                                                                                                                                                                                                                 k_1 = (a_8 \cdot V_b = \text{recv}(); \cdot (c_{15} \cdot E_{\text{auth}} = \text{check(b)}; \cdot (b_{12} \cdot C_n = \text{constructReply}(); \cdot S() = \text{send(n)}; + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I() = \log(b); \cdot X_x = x - i,? 1;) * \neg a_8 \\ k_2 = (a_{22} \cdot V_b = \text{recv}(); \cdot 1 \cdot J() = \log(b); \cdot (c_{28} \cdot C_n = \text{constructReply}(); \cdot S() = \text{send(n)}; \cdot G() = \log(n); + \neg c_{28} \cdot 1) \cdot X_x = x - i,? 1;) * \neg a_{22}
                                                                                                                                                                                                                          (Partial), cond c_{15}: b > 0
                                                                                                                                                                                                                                                                                                              k_1 = (a_8 \cdot V_b = \text{recy}(); \cdot (c_{15} \cdot E_{\text{auth}} = \text{check}(b); \cdot (b_{12} \cdot C_n = \text{constructReply}(); \cdot S() = \text{send}(n); + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I() = \log(b); \cdot X_x = x - i,? 1; \cdot x - a_8 \cdot (b_1 + b_2 \cdot b_2 \cdot b_3) + a_8 \cdot (b_1 + b_2 \cdot b_3 \cdot b_4 \cdot b_3) + a_8 \cdot (b_1 + b_2 \cdot b_3 \cdot b_4 \cdot b_3 \cdot b_4 \cdot b_3) + a_8 \cdot (b_1 + b_2 \cdot b_3 \cdot b_4 \cdot b_4 \cdot b_3 \cdot b_4 \cdot b
                                                                                                                                                                                                                                                                                                           k_2 = (a_{22} \cdot V_b = \text{recv}(); \cdot 1 \cdot J() = \log(b); \cdot 1 \cdot C_n = \text{constructReply}(); \cdot S() = \text{send}(n); \cdot G() = \log(n); \cdot X_x = x - i,? 1;) * \neg a_{22}
                                                                                                                                                                                                                                                                                                         [Partial), cond b_{12}: auth > 0
                                                                                                                                                                                                                                                                                                                                                                                                    k_2 = (a_{22} \cdot V_b = \text{recv}(); \cdot 1 \cdot J() = \log(b); \cdot 1 \cdot C_b = \text{constructReply}(); \cdot S() = \text{send}(n); \cdot G() = \log(n); \cdot X_x = x - i,? 1;) * \neg a_{22}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \begin{aligned} &Axioms: \{I=1, J=1, K=1, M=1\} \\ &k_1 = (as \cdot V_{\mathbf{b}} = \text{recv}(); \cdot 1 \cdot K_{\mathbf{auth}} = \text{check(b)}; \cdot 1 \cdot C_{\mathbf{n}} = \text{constructReply()}; \cdot S() = \text{send(n)}; \cdot X_{\mathbf{x}} = \mathbf{x} - \mathbf{i}, ? \quad 1;) * \neg a_8 \\ &k_2 = (a_{22} \cdot V_{\mathbf{b}} = \text{recv}(); \cdot 1 \cdot J() = \log(\mathbf{b}); \cdot 1 \cdot C_{\mathbf{n}} = \text{constructReply()}; \cdot S() = \text{send(n)}; \cdot M() = \log(\mathbf{n}); \cdot X_{\mathbf{x}} = \mathbf{x} - \mathbf{i}, ? \quad 1;) * \neg a_{22} \end{aligned}
                                                                                                                                                                                                                     k_1 = (a_8 \cdot V_b = \text{recv}(); \cdot (c_{15} \cdot E_{\text{auth}} = \text{check(b)}; \cdot (b_{12} \cdot C_n = \text{constructReply}(); \cdot S() = \text{send(n)}; + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I_{()} = \log(b); ) \cdot X_x = x - \text{i.},? 1;) * \neg a_8 \\ k_2 = (a_{22} \cdot V_b = \text{recv}(); \cdot 1 \cdot J_{()} = \log(b); \cdot (c_{28} \cdot C_n = \text{constructReply}(); \cdot S() = \text{send(n)}; \cdot G() = \log(n); + \neg c_{28} \cdot 1) \cdot X_x = x - \text{i.},? 1;) * \neg a_{22}
                                                                                                                                                                                                                            (Partial), cond c_{15}: b > 0
                                                                                                                                                                                                                                                                                                              k_1 = (a_8 \cdot V_b = \text{recy}(); (c_{15} \cdot K_{\text{auth}} = \text{check}(b); (b_{12} \cdot C_n = \text{constructReply}(); S() = \text{send}(n); + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I() = \log(b); (b_{12} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C_n = c_{13} \cdot 1; ) * \neg a_{13} \cdot I() = \log(b); (b_{13} \cdot C
                                                                                                                                                                                                                                                                                                              k_2 = (a_{22} \cdot V_b = \text{recv}(); \cdot 1 \cdot J() = \log(b); \cdot 1 \cdot 1 \cdot X_x = x - 1; \cdot x - 1;
                                                                                                                                                                                                                                                                                                              (Partial), cond b_{12}: auth > 0
                                                                                                                                                                                                                                                                                                                                                                                                 k_{1} = (a_{8} \cdot V_{b} = \text{recv}(); \cdot 1 \cdot K_{auth} = \text{check(b)}; \cdot (b_{12} \cdot C_{n} = \text{constructReply()}; \cdot S() = \text{send(n)}; + \neg b_{12} \cdot 1) \cdot X_{x} = x - \text{i.}; \cdot 1;) * \neg a_{8}
k_{2} = (a_{22} \cdot V_{b} = \text{recv}(); \cdot 1 \cdot J() = \log(b); \cdot 1 \cdot 1 \cdot X_{x} = x - \text{i.}; \cdot 1;) * \neg a_{22}
                                                                                                                                                                                                                                                                                                                                                                                                    AComplete
                                                                                                                                                                                                                                                                                                                                                                                                       \begin{cases} Axioms: \{I=1, J=1, K=1\} \\ k_1 = (a_8 \cdot V_b = \text{recv}(); {}^{1} \cdot K_{\text{auth}} = \text{check(b)}; {}^{1} \cdot {}^{1} \cdot X_{\text{x}} = \text{x --i,? 1}; ) * \neg a_8 \\ k_2 = (a_{22} \cdot V_b = \text{recv}(); {}^{1} \cdot J() = \log(b); {}^{1} \cdot {}^{1} \cdot X_{\text{x}} = \text{x --i,? 1}; ) * \neg a_{22} \end{cases} 
                                                                                                                                                                                                                                                                                                           k_1 = (a_8 \cdot V_b = \text{recv}(); (c_{15} \cdot K_{\text{auth}} = \text{check(b)}; (b_{12} \cdot C_n = \text{constructReply}(); S() = \text{send(n)}; + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I() = \log(b); (b_{12} \cdot C_n = c_{13} \cdot 1; + \neg a_{13} \cdot 
                                                                                                                                                                                                                                                                                                              k_2 = (a_{22} \cdot V_b = \text{recv}(); \cdot 1 \cdot J() = \log(b); \cdot 1 \cdot 1 \cdot X_x = x - 1; \cdot x - 1;
                                                                                                                                                                                                                                                                                                                                                                                             \begin{array}{l} k_1 = (a_8 \cdot V_{\rm b} = {\rm recv}(); \cdot 1 \cdot I() = \log({\rm b}); \cdot X_{\rm x} = {\rm x} - {\rm i},? \quad 1;) * \neg a_8 \\ k_2 = (a_{22} \cdot V_{\rm b} = {\rm recv}(); \cdot 1 \cdot J() = \log({\rm b}); \cdot 1 \cdot 1 \cdot X_{\rm x} = {\rm x} - {\rm i},? \quad 1;) * \neg a_{22} \end{array}
                                                                                                                                  Case \neg d_{30}:
                                                                                                                               k_1 = (a_8 \cdot V_b = \texttt{recv}(); \cdot (c_{15} \cdot E_{\texttt{auth}} = \texttt{check}(b); \cdot (b_{12} \cdot C_n = \texttt{constructReply}(); \cdot S() = \texttt{send}(n); + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I() = \log(b); ) \cdot X_x = x - \texttt{i}; ? - 1;) * \neg a_8 + \cdots + \neg b_{12} \cdot 1 + \neg b_{13} \cdot 1 + \neg b
                                                                                                                                  k_2 = (a_{22} \cdot V_{\text{b} = \text{recv()}}; \cdot (d_{30} \cdot L_{\text{()}} = \log(b); + \neg d_{30} \cdot 1) \cdot (c_{28} \cdot C_{\text{n}} = \text{constructReply()}; \cdot S_{\text{()}} = \text{send(n)}; \cdot (d_{25} \cdot G_{\text{()}} = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{n}} = \text{constructReply()}; \cdot S_{\text{()}} = \text{send(n)}; \cdot (d_{25} \cdot G_{\text{()}} = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{n}} = \text{constructReply()}; \cdot S_{\text{()}} = \text{send(n)}; \cdot (d_{25} \cdot G_{\text{()}} = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{n}} = \text{constructReply()}; \cdot S_{\text{()}} = \text{send(n)}; \cdot (d_{25} \cdot G_{\text{()}} = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{n}} = \text{constructReply()}; \cdot S_{\text{()}} = \text{send(n)}; \cdot (d_{25} \cdot G_{\text{()}} = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{n}} = \text{constructReply()}; \cdot S_{\text{()}} = \text{send(n)}; \cdot (d_{25} \cdot G_{\text{()}} = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{n}} = \text{constructReply()}; \cdot S_{\text{()}} = \text{send(n)}; \cdot (d_{25} \cdot G_{\text{()}} = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{n}} = \text{constructReply()}; \cdot S_{\text{()}} = \text{send(n)}; \cdot (d_{25} \cdot G_{\text{()}} = \log(n); + \neg d_{25} \cdot 1) + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{x}} = \text{x --i,?} \quad 1;) * \neg a_{22} \cdot C_{\text{x}} = \text{x --i,?} \quad 1;
                                                                                                                                         (Partial), cond c_{28}: b > 0
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\begin{cases} Case \neg c_{28}: \\ k_{1} = (as \cdot V_{b} = \operatorname{recv}(); \cdot (c_{15} \cdot K_{\text{auth}} = \operatorname{check}(b); \cdot (b_{12} \cdot C_{\text{n}} = \operatorname{constructReply}(); \cdot S() = \operatorname{send}(n); + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I() = \log(b); ) \cdot X_{\text{x}} = \text{x} - \text{i.}, ? \quad 1; ) * \neg a_{8} \\ k_{2} = (a_{22} \cdot V_{b} = \operatorname{recv}(); \cdot 1 \cdot 1 \cdot (c_{28} \cdot C_{\text{n}} = \operatorname{constructReply}(); \cdot S() = \operatorname{send}(n); \cdot 1 + \neg c_{28} \cdot 1) \cdot X_{\text{x}} = \text{x} - \text{i.}, ? \quad 1; ) * \neg a_{22} \\ \end{cases} 
(Partial), \text{ cond } c_{15}: b > 0
\begin{cases} Case c_{15}: \\ k_{1} = (as \cdot V_{b} = \operatorname{recv}(); \cdot (c_{15} \cdot K_{\text{auth}} = \operatorname{check}(b); \cdot (b_{12} \cdot C_{\text{n}} = \operatorname{constructReply}(); \cdot S() = \operatorname{send}(n); + \neg b_{12} \cdot 1) + \neg c_{15} \cdot I() = \log(b); ) \cdot X_{\text{x}} = \text{x} - \text{i.}, ? \quad 1; ) * \neg a_{8} \\ k_{2} = (a_{22} \cdot V_{b} = \operatorname{recv}(); \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot X_{\text{x}} = \text{x} - \text{i.}, ? \quad 1; ) * \neg a_{22} \\ \end{cases}
(Partial), \text{ cond } b_{12}: \text{ auth } > 0
\begin{cases} Case c_{15}: \\ k_{1} = (a_{8} \cdot V_{b} = \operatorname{recv}(); \cdot 1 \cdot K_{\text{auth}} = \operatorname{check}(b); \cdot (b_{12} \cdot C_{\text{n}} = \operatorname{constructReply}(); \cdot S() = \operatorname{send}(n); + \neg b_{12} \cdot 1) \cdot X_{\text{x}} = \text{x} - \text{i.}, ? \quad 1; ) * \neg a_{8} \\ k_{2} = (a_{22} \cdot V_{b} = \operatorname{recv}(); \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot X_{\text{x}} = \text{x} - \text{i.}, ? \quad 1; ) * \neg a_{22} \end{cases}
AComplete
Acomplete
Acomplete \begin{cases} Axioms: \{I = 1, K = 1\} \\ k_{1} = (a_{8} \cdot V_{b} = \operatorname{recv}(); \cdot 1 \cdot K_{\text{auth}} = \operatorname{check}(b); \cdot 1 \cdot 1 \cdot X_{\text{x}} = \text{x} - \text{i.}, ? \quad 1; ) * \neg a_{8} \\ k_{2} = (a_{22} \cdot V_{b} = \operatorname{recv}(); \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot X_{\text{x}} = \text{x} - \text{i.}, ? \quad 1; ) * \neg a_{22} \end{cases}
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Remaining 63 solutions ommitted for brevity.