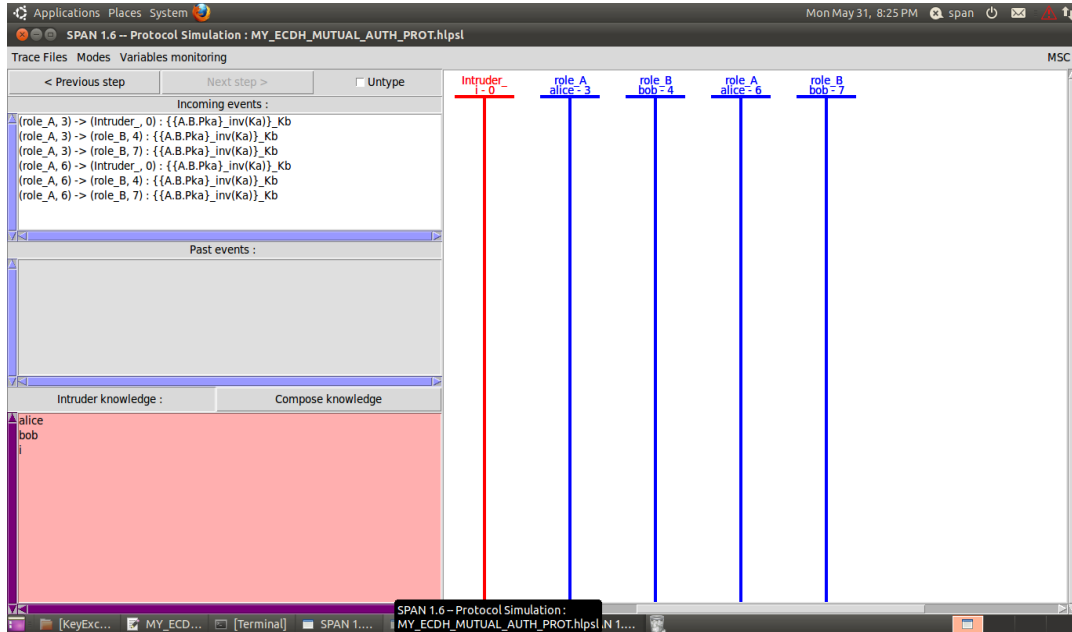
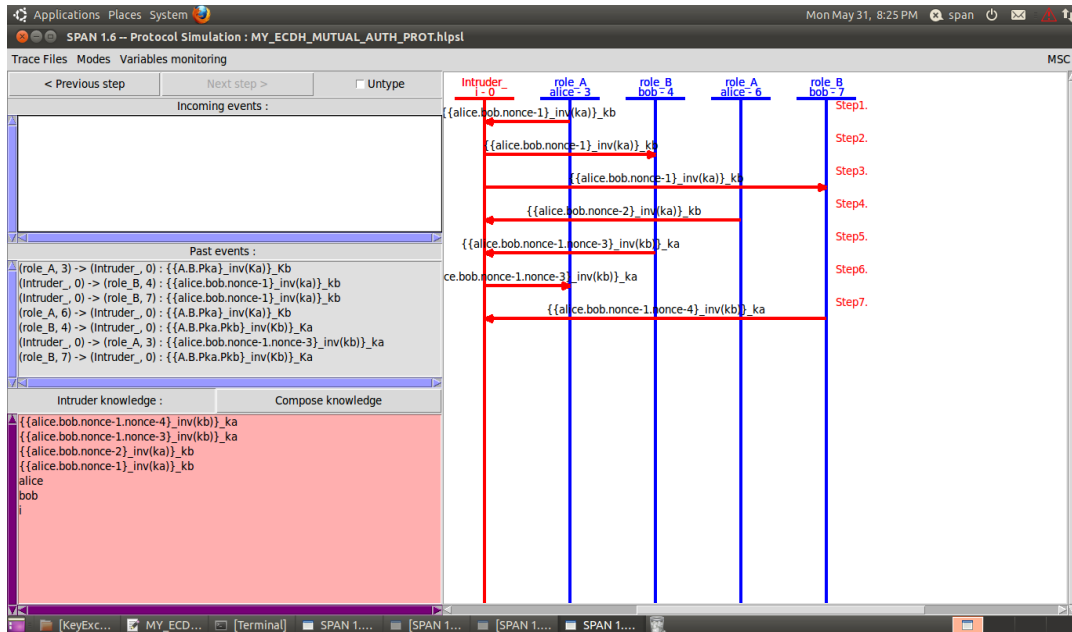


## Appendix C

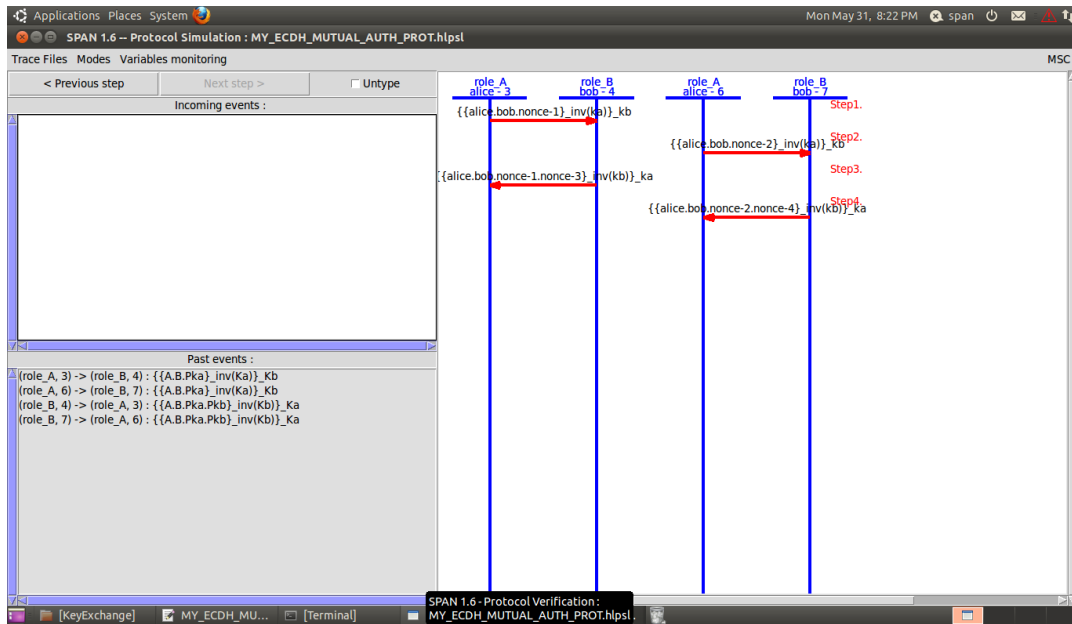
### Security Protocol Verification of The Presented Mutual Authentication Scheme in AVISPA + SPAN Simulator



(a) – AVISPA intruder model with OFMC security checker in Step 1



(b) – AVISPA intruder model with ATSE security checker on concluding all steps



(c)- AVISPA intruder model after successful mutual authentication

Figure 7.4: Presented scheme's protocol verification in AVISPA + SPAN simulator

Figure 7.4 shows the AVISPA + SPAN security protocol verification simulator. The three illustrations in the figure represents different steps of simulation for OFMC, ATSE and TA4SP checker models. All the models have results as safe models for mutual authentication schemes.