With the extremely development of internet and computer networks, they become more and more important for our daily life. But, they are exposed to an increasingly number of security threats. Many new types of attack continually appear and developing flexible so applying the security approaches becomes more a challenge. Using Intrusion Detection System (IDS) to detect intrusion actions is the most common way nowadays. However, the huge number of alerts generated by IDSs is an obstruction to system administrator to control the system. Alert correlation would be an effective technique to improve the quality of the alerts. This paper focuses on how to construct an alert correlation system with some improvements from proposed systems. Then, a comparative analysis on performance would show our system result.