

Experiments and Results

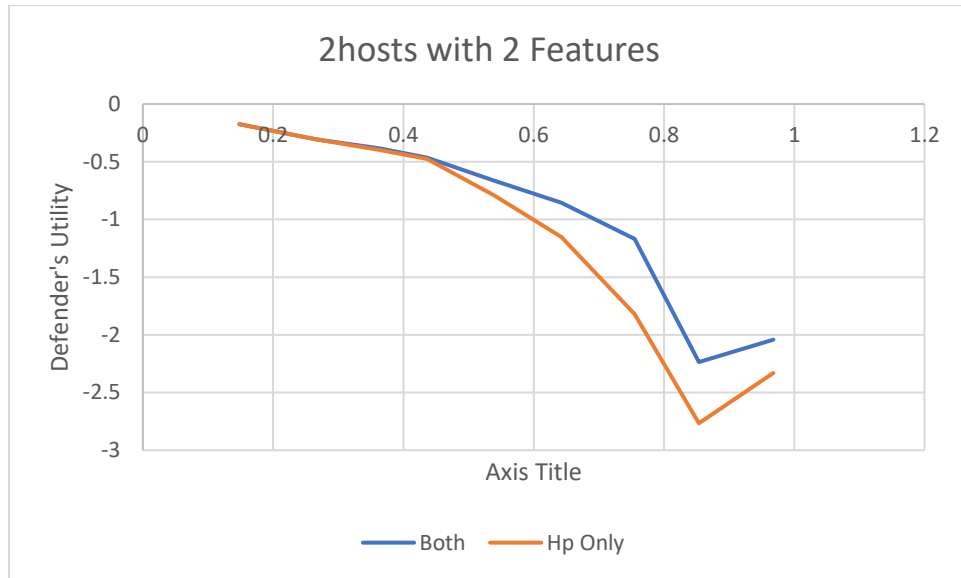


Figure 1: Defender's utility modifies both vs modify only Hp with same importance value (10) and different modification cost (Real cost =2.5 and Hp cost = 1)

Result: Figure (1) shows that when two probability distributions are near similar the Defender follows the same strategies. But two-sided deception is very effective until certain dissimilarity (Approx.: 0.9).

Expected: The result is expected, but the difference is not significant.

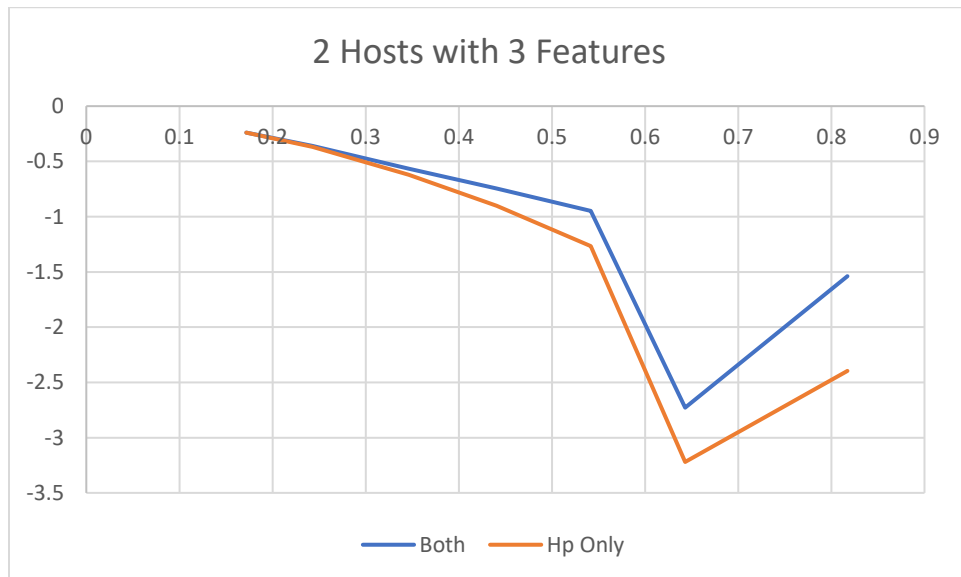


Figure 2: 2 hosts with 3 features in each. Both hosts have same importance value (10). Real modification cost is - 2.5 and honeypot modification cost is - 1

Result: Figure (2) shows that when the number of features is increased then the defender's strategy to modify the real host starts earlier.

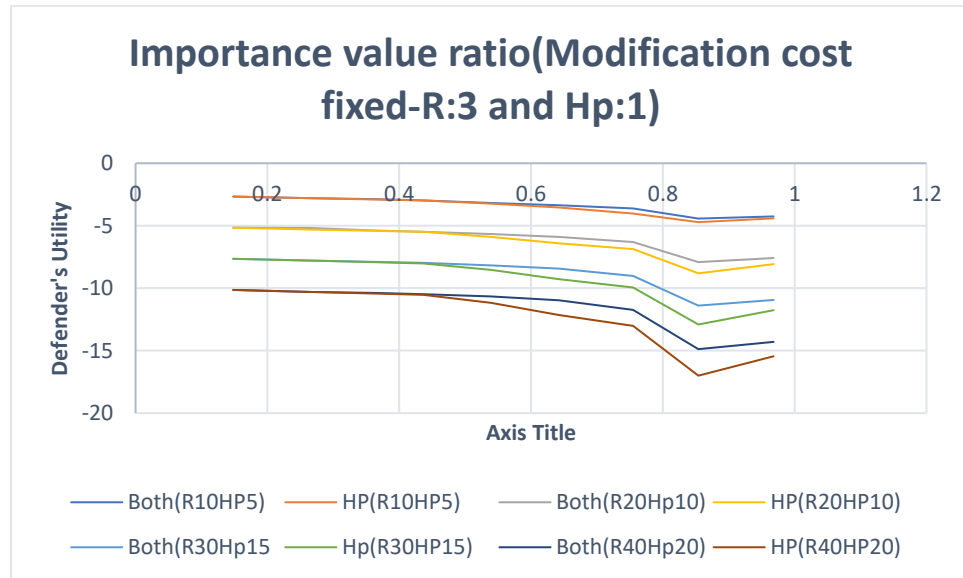
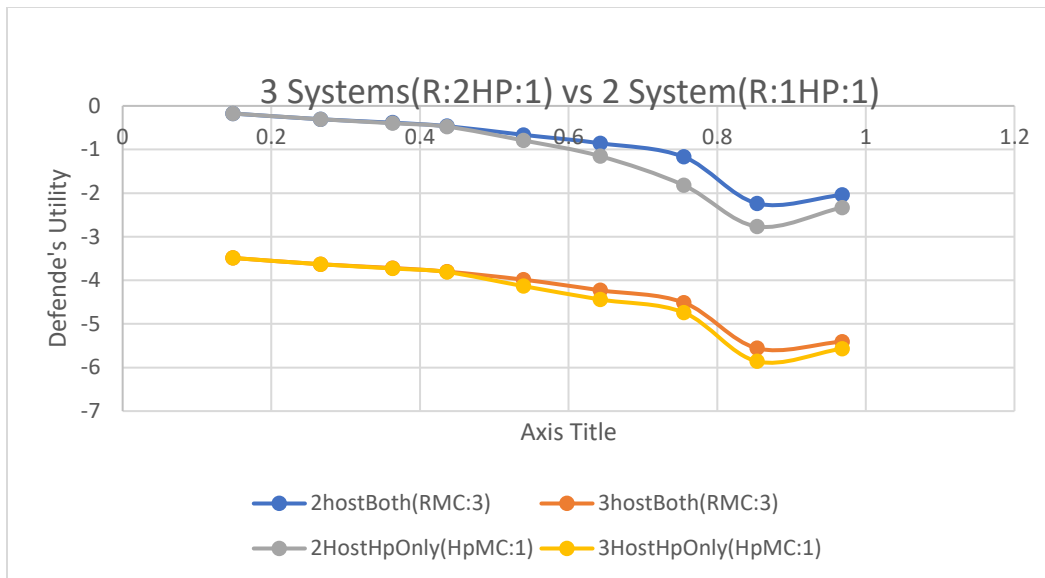


Figure 3: Different important value ratio with fixed modification cost (real modification cost =3 and honeypot modification cost =1). R40HP20 denotes the important value of the real is 40 and of the honeypot is 20. The ratio between important values is 1:2

Result: Figure (3) shows that two-sided deception becomes more effective when the importance values are high, but the modification costs are relatively low.

Expected: The results are expected- the difference between the two modification types should be significant when the importance values are high. Normally, the defender's strategy to modify real is less hence to get a significant difference should be so high.



Results: The figure shows that two-sided deception becomes less effective when the number of real hosts are increased.

Expected: The result is expected because if the number of real hosts is increased, the probability to detect a real host by the attacker is also increased.

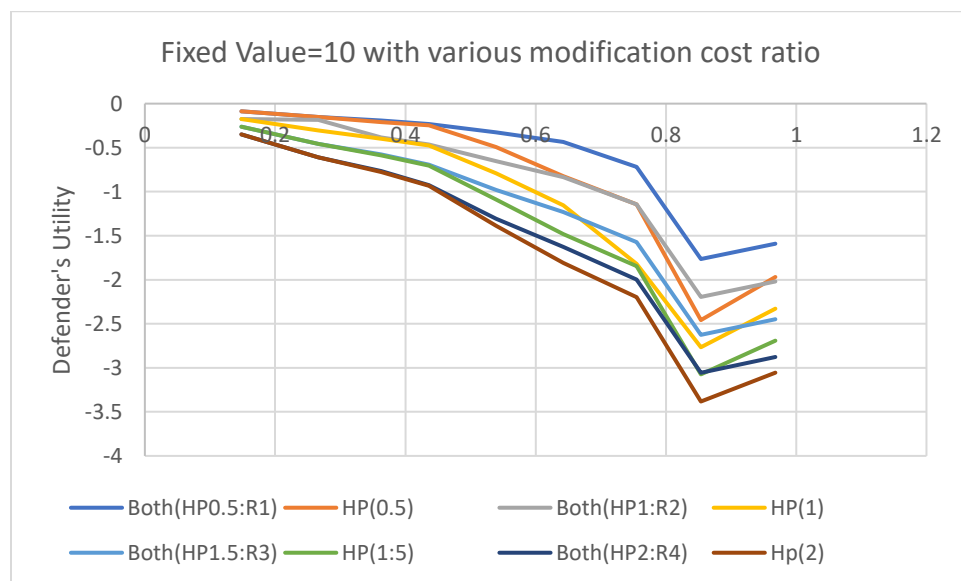


Figure 6: Fixed important value (10 for both) with different modification cost ratio. The modification cost ratio between the real host and honeypot is 1:2

Result: No significant result is found from the figure (6)