An Introduction to Network Address Shuffling

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Abstract—Moving Target Defense (MTD) has been proposed as a new revolutionary technology to alter the asymmetric situation between attacks and defenses. Network address shuffling is an important branch of the MTD technology. However, there is no systematic introduction to network address shuffling. In this paper, we present a brief introduction to the research achievements of network address shuffling according to two shuffling patterns which are identified and defined by us. We then summarize and analyze the supporting techniques and related features for each network address shuffling technique mentioned in this paper. What's more, the key issues to implement an effective network address shuffling mechanism are discussed, with the expectation of invigorating subsequent research.

Keyword—Moving Target Defense, Network Address Shuffling, introduction, analysis, discussion



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