Test Cases:

**With Kernel Module inserted:**

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| Test Case 1 | **Title:** SSH - Remote Client to Web Server | Result: **PASS** |
| **Description** | An SSH request to connect to the Web server (10.10.10.5) is run from the remote client. Since the kernel module is inserted, this SSH command should not be successful and this packet should be dropped at the firewall.  It is seen that the packet is dropped as required and an entry is made in the log file. | |
| **Logs** |  | |

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| Test Case 2 | **Title:** SSH - Remote Client to Host 2 | Result: **PASS** |
| **Description** | An SSH request to connect to the Host 2 (10.10.10.3) is run from the remote client. Since the kernel module is inserted, this SSH command should not be successful and this packet should be dropped at the firewall.  It is seen that the packet is dropped as required and an entry is made in the log file. | |
| **Logs** |  | |

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| Test Case 3 | **Title:** SSH - Web Server to Remote Client | Result: **PASS** |
| **Description** | An SSH request to connect to the remote client is run from Web Server (10.10.10.5). Even though kernel module is inserted, the firewall should allow this outbound packet to go through.  It is seen that the packet is allowed to go through and a response is seen. | |
| **Logs** |  | |

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| Test Case 4 | **Title:** SSH – Host 2 to Remote Client | Result: **PASS** |
| **Description** | An SSH request to connect to the remote client is run from Host 2 (10.10.10.3). Even though kernel module is inserted, the firewall should allow this outbound packet to go through.  It is seen that the packet is allowed to go through and a response is seen. | |
| **Logs** |  | |

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| Test Case 5 | **Title:** ICMP - Remote Client to Web Server | Result: **PASS** |
| **Description** | An ICMP request is sent to the Web server (10.10.10.5) from the remote client. Even though the kernel module is inserted, this request should be successful and this packet should be allowed to go through at the firewall.  It is seen that the packet is allowed to go through and a response is seen. | |
| **Logs** |  | |

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| Test Case 6 | **Title:** ICMP - Remote Client to Host 2 | Result: **PASS** |
| **Description** | An ICMP request is sent to Host 2 (10.10.10.3) from the remote client. Since the kernel module is inserted, this request should not be successful as per the rule and this packet should be dropped at the firewall.  It is seen that the packet is dropped as required and an entry is made in the log file. | |
| **Logs** |  | |

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| Test Case 7 | **Title:** ICMP - Web Server to Remote Client | Result: **PASS** |
| **Description** | An ICMP request is sent to the remote client from the Web server (10.10.10.5). Even though the kernel module is inserted, this outbound request should be successful and this packet should be allowed to go through at the firewall.  It is seen that the packet is allowed to go through and a response is seen. | |
| **Logs** |  | |

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| Test Case 8 | **Title:** ICMP – Host 2 to Remote Client | Result: **PASS** |
| **Description** | An ICMP request is sent to the remote client from the Host 2 (10.10.10.3). Even though the kernel module is inserted, this outbound request should be successful and this packet should be allowed to go through at the firewall.  It is seen that the packet is allowed to go through and a response is seen. | |
| **Logs** |  | |

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| Test Case 9 | **Title:** CURL of webpage - Remote Client to Web Server | Result: **PASS** |
| **Description** | A curl request to access the web page present on Web Server (10.10.10.5) is sent from the Remote Client. Since remote clients are allowed to access the pages on the Web Server, this packet should be allowed to go through by the firewall.  It is seen that the packet is allowed to go through and the curl output snippet is seen as response. | |
| **Logs** |  | |

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| Test Case 10 | **Title:** CURL of webpage - Remote Client to Host 2 | Result: **PASS** |
| **Description** | A curl request to access the web page present on Host 2 (10.10.10.3) is sent from the Remote Client. Since remote clients are only not allowed to access the pages on Host 2, this packet should be dropped by the firewall due to the kernel module rules.  It is seen that the packet is dropped as required and an entry is made in the log file. | |
| **Logs** |  | |

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| Test Case 11 | **Title:** CURL of webpage –Host 2 to Web Server | Result: **PASS** |
| **Description** | A curl request to access the web page present on Web Server (10.10.10.5) is sent from the Host 2. Since it is within the network, this packet is allowed to go through by the firewall.  It is seen that the packet is allowed to go through and the curl output snippet is seen as response. | |
| **Logs** |  | |

**Without Kernel Module:**

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| Test Case 12 | **Title:** SSH - Remote Client to Machine in Network | Result: **PASS** |
| **Description** | An SSH request to connect to the Web server (10.10.10.5) is run from the remote client. Since the kernel module is not inserted, this SSH command should be successful and this packet should go through.  It is seen that the packet goes through and a response is seen. | |
| **Logs** |  | |

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| Test Case 13 | **Title:** SSH - Network to Remote Client | Result: **PASS** |
| **Description** | An SSH request to connect to the remote client is run from within the organizational network, ie Web Server (10.10.10.5). This request should go through.  It is seen that the packet goes through and a response is seen. | |
| **Logs** |  | |

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| Test Case 4 | **Title:** ICMP - Remote Client to Network | Result: **PASS** |
| **Description** | An ICMP request is sent to the Web server (10.10.10.5) from the remote client. Since the kernel module is not inserted, this ICMP request should be successful and this packet should go through.  It is seen that the packet goes through and a response is seen. | |
| **Logs** |  | |

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| Test Case 15 | **Title:** ICMP - Network to Remote Client | Result: **PASS** |
| **Description** | An ICMP request is sent to the remote client from the Web server (10.10.10.5). This request should go through.  It is seen that the packet goes through and a response is seen. | |
| **Logs** |  | |

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| Test Case 16 | **Title:** CURL of webpage - Remote Client to Web Server | Result: **PASS** |
| **Description** | A curl request to access the web page present on Web Server (10.10.10.5) is sent from the Remote Client. This request should go through.  It is seen that the packet goes through and the curl output snippet is seen as response. | |
| **Logs** |  | |

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| Test Case 17 | **Title:** CURL of webpage - Remote Client to Host 2 | Result: **PASS** |
| **Description** | A curl request to access the web page present on Host 2 (10.10.10.3) is sent from the Remote Client. Since kernel module is not inserted, this request should go through.  It is seen that the packet goes through and the curl output snippet is seen as response. | |
| **Logs** |  | |

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| Test Case 18 | **Title:** CURL of webpage –Host 2 to Web Server | Result: **PASS** |
| **Description** | A curl request to access the web page present on Web Server (10.10.10.5) is sent from the Host 2. The packet goes through.  It is seen that the packet goes through and the curl output snippet is seen as response. | |
| **Logs** |  | |