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1 Overview

HackingTeam’s Tactical Network Injector (TNI) is a portable solution to infect targets connected to a WiFi network. It provides the agent with everything needed in order to crack a WiFi network, join it, identify the interested target and deploy the RCS agent.

The Tactical Network Injector can also be used in a cabled network, as long as the TNI is able to see the traffic of the target.

The Tactical Network Injector is capable of cracking a wireless network when the Pre-Shared Passphrase is unknown, including cracking of WEP, WPA and WPA2 wireless protection; it includes a dictionary of over 45 Million words for dictionary based attacks.

The TNI will support the identification of the host to be infected showing various information about all hosts connected to the network under attack, including but not limited to IP address, hostname and visited websites.

All devices identified as targets will be subject to different attacks, according to predetermined rules. Infection vectors include the injection of Java code into any visited webpage, or on-the-fly melting of the RCS agent with any executable file downloaded from the target.

The Tactical Network Injector is shipped with all necessary tools for its use and protection, including a ruggedized case for protection from shocks taken during operations and extra batteries that can guarantee up to 35 hours of continuous operation without need for any external power source. Wi-Fi cards support all the standard networks (802.11a, 802.11b, 802.11g, 802.11n), and optionally are provided removable antennas with RP-SMA connectors that allow the operator to use any kind of external equipment. Moreover, the TNI can be disguised as a regular laptop for use in undercover operations.

For maximum security, the Tactical Network Injector is protected by full disk encryption, to prevent any accidental leak of information if lost.
2 Tactical Control Center features

Tactical Control Center is the GUI to be used for performing all operations on the TNI.

Tactical Control Center enables you to:

- Crack protected WiFi network passwords
- Simulate a WiFi network to attract target devices
- Automatically identify connected devices using the rules and infect them
- Manually identify connected devices using the rules and infect them
3 Operative scenarios

If the target user is joined to a WiFi network, the Tactical Network Injector must be equipped with two WiFi cards. One card must be joined to the same network, by knowing the access key if any; the other card must be able to monitor the WiFi traffic of the same network.

The target infection using the Tactical Device may consist of two different steps: intrusion and infection.

In the first optional step the operator has to gain access to the network used by the target; the second step consists in the identification of the target device and the injection of the RCS Agent.

3.1 Wireless intrusion

When the target is connected to a protected WiFi network, it will be necessary to gain access to such network. The Tactical Network Injector can support the operator in this operation by providing robust cracking techniques for different WiFi protections or creating an ad hoc wireless network.

Cracking capabilities include the possibility to gain access to network protected by:

- Wired Equivalent Privacy (WEP): the exposure of a WEP passphrase can take as little as 3 minutes, and the TNI will automatically exploit protocol vulnerabilities in order to provide the user with the WiFi password in the shortest timeframe possible;

- WiFi Protected Access (WPA/WPA2): the retrieval of a WPA/WPA2 passphrase is subject to its strength. Attacks to WPA/WPA2 protected networks make use of dictionary-based attacks. The TNI will automatically cover all steps needed, from the deauthentication of the target to the cracking of the password. The TNI can also be used as a first tool to gather data (WPA Handshake) useful for offline attacks;

- WiFi Protected Setup (WPS): in cases in which the target router supports the WPS standard, a special attack can be used that can guarantee success in cracking the network within a reasonably short timeframe.

When having access to the targets wifi is not an option, the Tactical Network Injector can activate an Access Point that will give Free Internet Access to anybody in the area.

Since the TNI includes a 3G modem, it can share its connectivity with 3rd parties.

The traffic of all users of the TNI Access Point can be monitored by the TNI, and any user of the TNI Access Point can be selected as target.
3.2 Target identification

The identification of the target device to be infected is the second step in the TNI infection process, and it consists in the selection of the host that will be indicated as “to be infected”. Once on the field, the operator will be able to use different information in order to distinguish the hosts on the network and select the appropriate one. For each host, such information include:

- MAC Address
- IP Address
- Hostname
- Operating System
- Browser in use
- List of all visited website

Based on such information, an educated guess can be done and a target host can be immediately selected.

3.3 Target Infection

The infection methods used by the Tactical Network Injector can be configured defining specific rules using the RCS Console. The TNI provides many on-the-fly attacks:

- Web page Injection: when the target visit any website on the Internet, the TNI will inject in the viewed webpage additional code that, without requiring any user interaction, will install the RCS Agent;
- Executable file: when the target downloads any executable file (.exe) from the Internet, the TNI will append the RCS Agent to the downloaded application. As soon as the downloaded file is executed, the Agent will be installed on the device;
- Flash Injection: the target user will be prevented from viewing videos on YouTube, and will be provided with the request to update Adobe Flash in order to correctly use the YouTube website. As soon as the user, considering YouTube a trusted source, follows the link and upgrades Adobe Flash, the RCS Agent will be installed on the computer;
- On-the-fly replacement of any file: the TNI can be instructed to replace any file with a different file provided by the operator. I.e. it is possible to replace any .doc file downloaded by the target user with a .doc previously built and containing a zero-day exploit.
<table>
<thead>
<tr>
<th>Vector</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web page</td>
<td>TNI is able to inject special HTML code into any web page, triggering the installation of RCS agent during web browsing.</td>
</tr>
<tr>
<td>Executable file</td>
<td>An RCS agent is embedded into any downloaded executable (e.g., setup packages, automatic software updates)</td>
</tr>
<tr>
<td>Flash Injection</td>
<td>Inject RCS agent as flash update on specific web sites</td>
</tr>
<tr>
<td>Replacement</td>
<td>Any resource downloaded by the user can be replaced with any other file</td>
</tr>
</tbody>
</table>
4 Tactical Network Injector Components

Tactical Network Injector is a notebook contents in a briefcase with all components to support tactical operations.
The TNI briefcase contains:

<table>
<thead>
<tr>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notebook (Dell E6330)</td>
</tr>
<tr>
<td>Battery 97 Wh (Dell)</td>
</tr>
<tr>
<td>Battery 60 Wh (Dell)</td>
</tr>
<tr>
<td>Battery 30 Wh (Dell)</td>
</tr>
<tr>
<td>Car + Plain chargers (Dell)</td>
</tr>
<tr>
<td>Network card RJ45 external</td>
</tr>
<tr>
<td>Network card Wi-Fi external</td>
</tr>
<tr>
<td>Network card Wi-Fi internal (replacement)</td>
</tr>
<tr>
<td>USB extension cable 1 Mt</td>
</tr>
<tr>
<td>USB extension cable 3 Mt</td>
</tr>
<tr>
<td><strong>B A G</strong></td>
</tr>
<tr>
<td>Rugged bag</td>
</tr>
<tr>
<td>Shoulder belt</td>
</tr>
<tr>
<td>Internal sponge</td>
</tr>
</tbody>
</table>