**🧪 Experiment 7: Data Carving using Open Source Tool – Scalpel**

**✅ Step-by-Step Procedure (As Per PDF)**

**🔹 Step 1: Open the Scalpel Application**

In Kali Linux, open your terminal and run:

bash

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sudo scalpel

This will not run the tool directly but show the usage/help. You'll need to configure and run it properly as below.

**🔹 Step 2: Edit scalpel.conf File**

The scalpel.conf file tells Scalpel which file types to carve.

1. Open it in a text editor:

bash

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sudo nano /etc/scalpel/scalpel.conf

1. Scroll down to the **file format section** (e.g., for JPG, PNG, PDF, DOC, etc.).
2. **Uncomment** the lines for the file types you want to recover. (Remove # from the start of those lines.)

Example (enable JPEG):

nginx

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jpeg y 5000000 \xff\xd8\xff \xff\xd9

1. Save and exit:

* Press Ctrl+O to save
* Press Enter
* Press Ctrl+X to exit

**🔹 Step 3: Prepare or Download Disk Image**

If you already have a disk image (e.g., diskimage.dd, usbimage.img), skip to Step 4.

To create one using dd:

bash

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sudo dd if=/dev/sdb of=~/usbimage.img

Replace /dev/sdb with your actual device name (use sudo fdisk -l to check).

**🔹 Step 4: Carve Files from the Disk Image**

Use the following command format:

bash

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sudo scalpel <path\_to\_disk\_image> -o <output\_folder>

Example:

bash

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sudo scalpel ~/usbimage.img -o ~/scalpel\_output

-o specifies the output directory where recovered files will be saved.

Scalpel will now:

* Scan the image file
* Carve out files based on headers/footers you enabled in scalpel.conf
* Store them in the scalpel\_output folder

**🧾 Output:**

* Recovered files (e.g., .jpg, .pdf, .docx) will be stored in:

bash

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~/scalpel\_output/