Automatically Running a JAR File in Linux Using rc.local

This step-by-step guide will show you how to configure a .jar file to run automatically at system startup using the rc.local file.

Step 1: Verify or Create the rc.local File

1. Check if the rc.local file exists:

```
sudo ls -l /etc/rc.local
```

   - If it exists, proceed to Step 2.
   - If it doesn't exist, create it:

     ```
     sudo nano /etc/rc.local
     ```

     Add the following line at the top of the file to specify the shell interpreter:

     ```
     #!/bin/bash
     ```

     Save and close the file (Ctrl+O, Enter, Ctrl+X).

Step 2: Add the Command to Run the JAR File

1. Open the rc.local file for editing:

```
sudo vi /etc/rc.local
```

2. Add the command to execute your .jar file. Place it before the line exit 0:

```
touch /var/lock/subsys/local
java -jar /home/ec2-user/couponservice-0.0.1-SNAPSHOT.jar &
```

   - Replace /path/to/yourfile.jar with the full path to your JAR file.
   - The & runs the command in the background to avoid blocking startup.
   - The touch command creates a lock file (commonly used in some Linux setups to indicate rc.local has run).

Step 3: Make rc.local Executable

1. Change the permissions of the rc.local file to make it executable:

```
sudo chmod +x /etc/rc.local
```

Step 4: Test the rc.local Script

1. Run the script manually to ensure it works:

```
sudo /etc/rc.local
```

   - If the JAR file runs correctly, proceed to the next step.
   - If there's an issue, double-check the path and permissions.

Step 5: Enable the rc-local Service (if required)

On some Linux distributions (e.g., Ubuntu), the rc-local service might need to be enabled:

1. Enable the service:

```
sudo systemctl enable rc-local
```

2. Start the service to test:

```
sudo systemctl start rc-local
```

3. Verify the service status:

```
sudo systemctl status rc-local
```

Step 6: Make Your JAR File Executable

1. Ensure the JAR file is executable:

```
chmod +x /path/to/yourfile.jar
```

Step 7: Reboot and Verify (Restart Instance)

1. Reboot the system to test if the JAR runs automatically at startup:

```
sudo reboot
```