1. Install Squid

- Update package lists:

    Bash

    ```
    sudo apt update
    ```

- Install Squid:

    Bash

    ```
    sudo apt install squid
    ```

2. Configure Squid

- Edit the Squid configuration file:

    Bash

    ```
    sudo nano /etc/squid/squid.conf
    ```

- Uncomment and modify the following lines:
  - `http_port 3128` : This line specifies the port that the Squid proxy will listen on.
  - `http_access allow all` : This line allows all clients to access the proxy. You can modify this to restrict access based on IP addresses, client names, or other criteria.
  - `cache_mem 256 MB` : Adjust the cache size based on your available memory.
- (Optional) Enable authentication:
  - Create a password file:

        Bash

        ```
        sudo htpasswd -c /etc/squid/passwords proxyuser
        ```

    - Replace `proxyuser` with the desired username.
    - Enter and confirm a strong password.
  - Modify the Squid configuration to require authentication:

        ```
        http_access deny all
        http_access allow localhost
        ```

```
acl authenticated proxy_auth REQUIRED
http_access allow authenticated
```

- Save and close the `squid.conf` file.

3. Start and enable Squid

- Start the Squid service:

    Bash

    ```
    sudo systemctl start squid
    ```

- Enable Squid to start on system boot:

    Bash

    ```
    sudo systemctl enable squid
    ```

4. Configure Client Systems

- On each client system, configure network settings to use the Squid proxy:
  - Open network settings.
  - Go to "Proxy" or "Network Proxy" settings.
  - Select "Manual" or "Custom" proxy settings.
  - Enter the IP address of the server running Squid in the "HTTP Proxy" field.
  - Enter the port number (3128 by default) in the "Port" field.
  - (Optional) Enter username and password if authentication is enabled.

5. Test the Proxy

- Open a web browser on a client system.
- Try to access a website.
- Verify that the web browser uses the Squid proxy to access the internet.

Important Notes:

- Security:
  - Implement strong authentication if you enable it.
  - Regularly update Squid to the latest version for security patches.
  - Consider using a firewall to restrict access to the Squid server.
- Performance:
  - Adjust cache size and other settings based on your network traffic and available resources.
- This is a basic configuration. You can further customize Squid by configuring advanced features such as:
  - Caching policies

- Content filtering
- Bandwidth control
- HTTPS support

Disclaimer: This information is for educational purposes only. I am not responsible for any issues that may arise from implementing these instructions. Always exercise caution and follow security best practices.