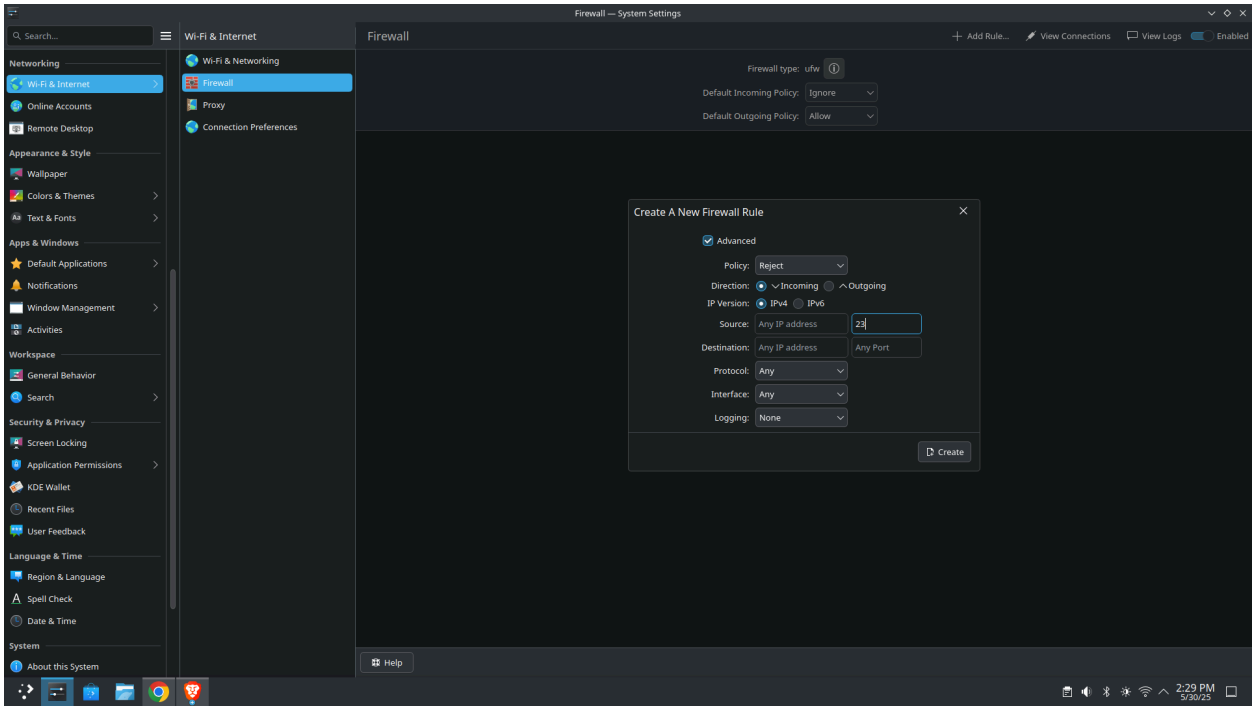
Firewall — System Settings
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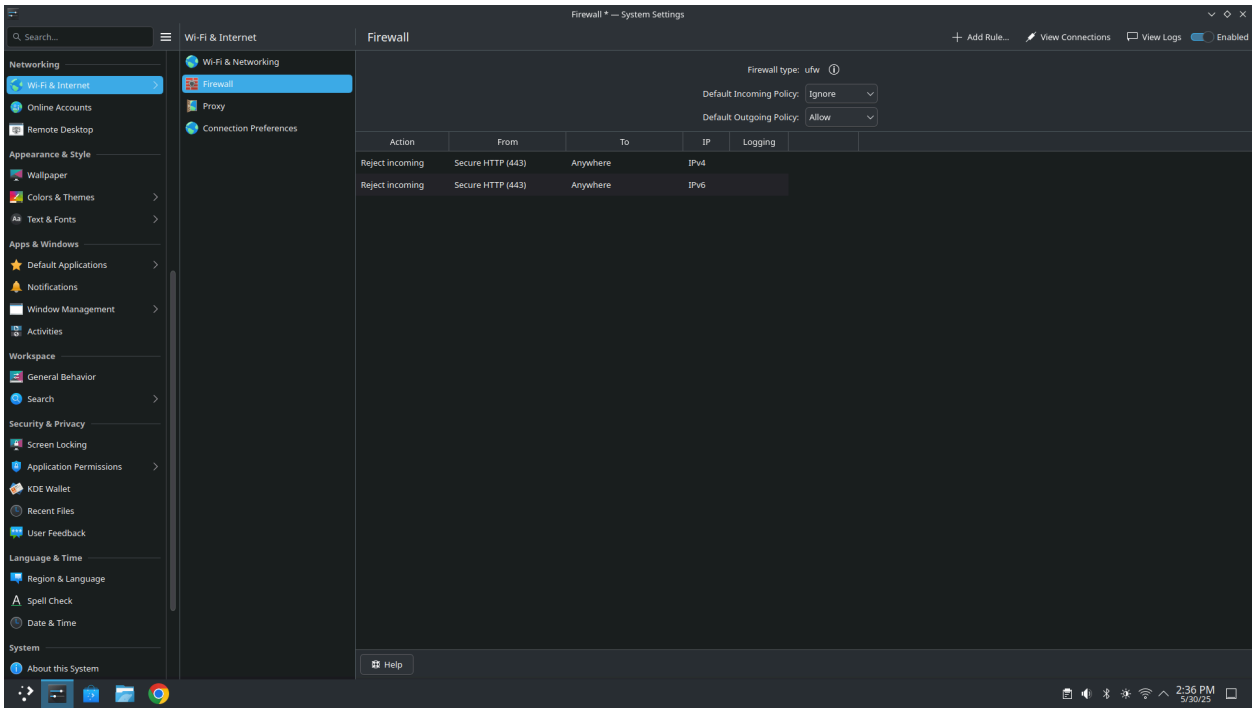
Search
Security & Privacy
Screen Locking
Application Permissions
KDE Wallet
Recent Files
User Feedback
Language & Time
Region & Language
Spell Check
Date & Time
System
About this System
Wi-Fi & Networking
Firewall
Proxy
Connection Preferences
Firewall
Add Rule...
View Connections
View Logs
Enabled
Firewall type: ufw
Default Incoming Policy: Ignore
Default Outgoing Policy: Allow
Create A New Firewall Rule
Advanced
Policy: Reject
Direction: Incoming Outgoing
IP Version: IPv4 IPv6
Source: Any IP address
23
Destination: Any IP address
Any Port
Protocol: Any
Interface: Any
Logging: None
Create
Help
2:29 PM
5/30/25


Firewall * — System Settings
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Firewall
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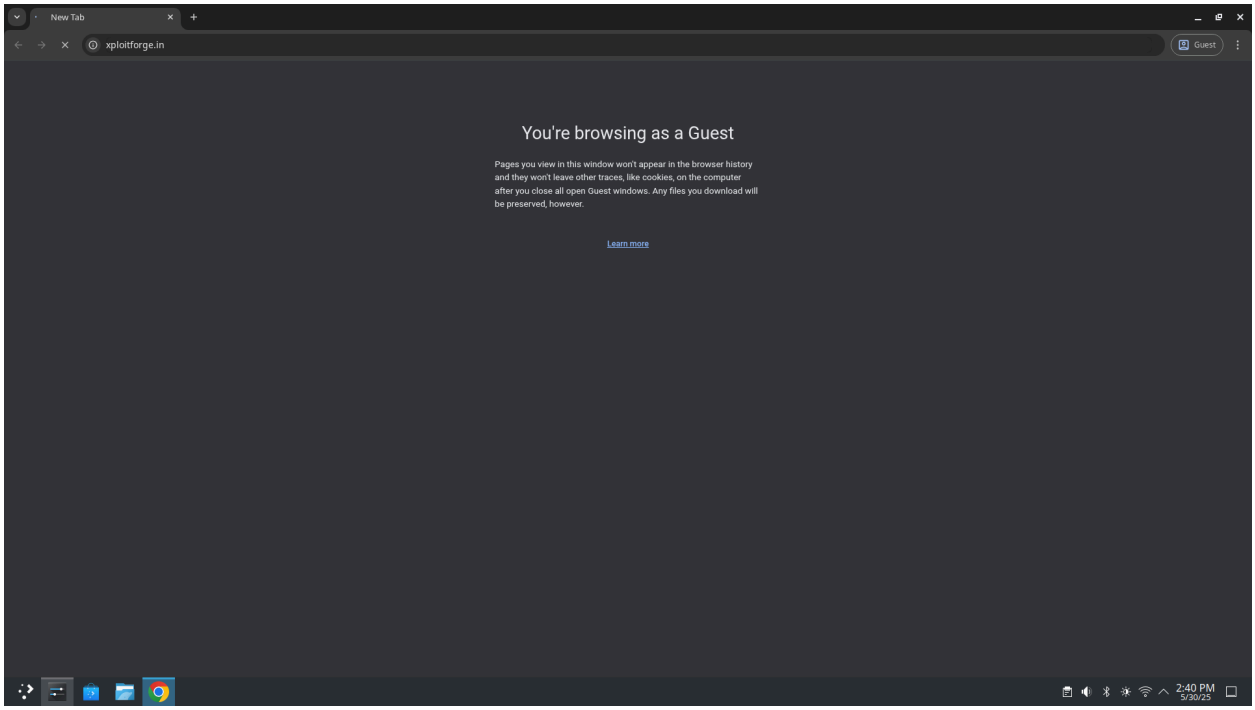
Connection Preferences
Firewall
Add Rule...
View Connections
View Logs
Enabled
Firewall type: ufw
Default Incoming Policy: Ignore
Default Outgoing Policy: Allow
Action
From
To
IP
Logging
Reject incoming
Secure HTTP (443)
Anywhere
IPv4
Reject incoming
Secure HTTP (443)
Anywhere
IPv6
Help
2:36 PM
5/30/25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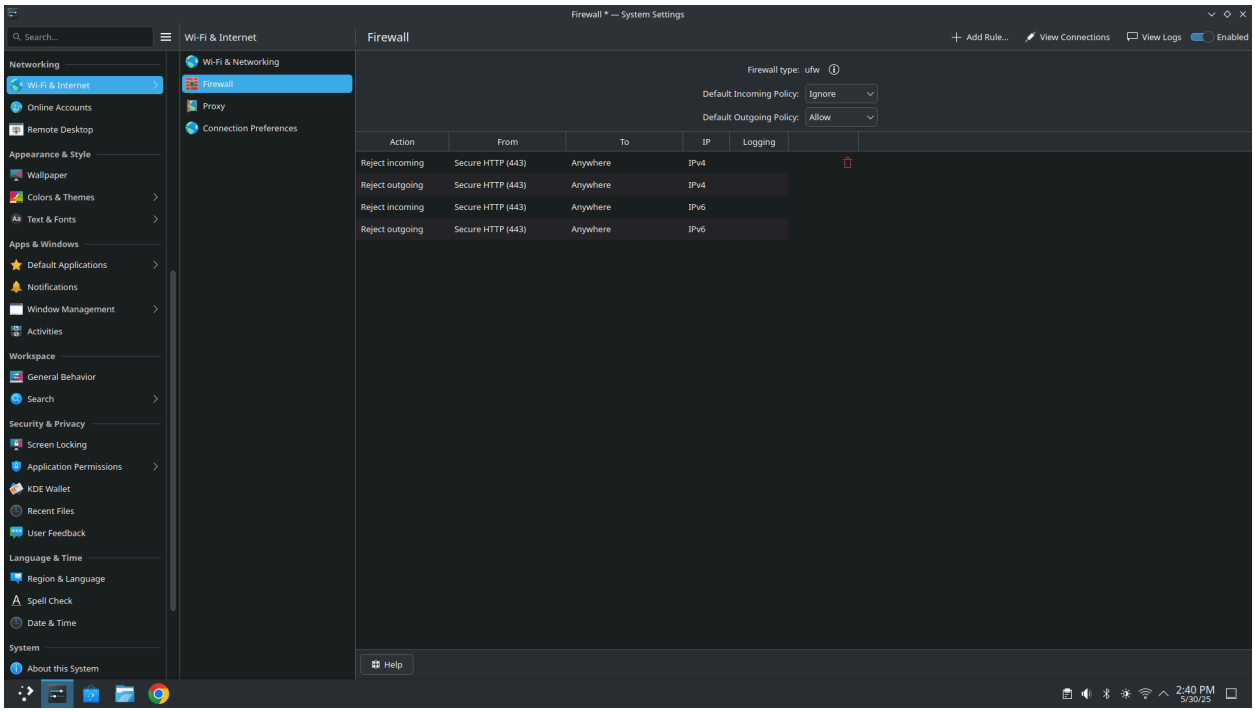
You're browsing as a Guest
Pages you view in this window won't appear in the browser history and they won't leave other traces, like cookies, on the computer after you close all open Guest windows. Any files you download will be preserved, however.
Learn more
2:40 PM
5/30/25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Firewall type: ufw
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Reject incoming
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Anywhere
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Reject outgoing
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Help
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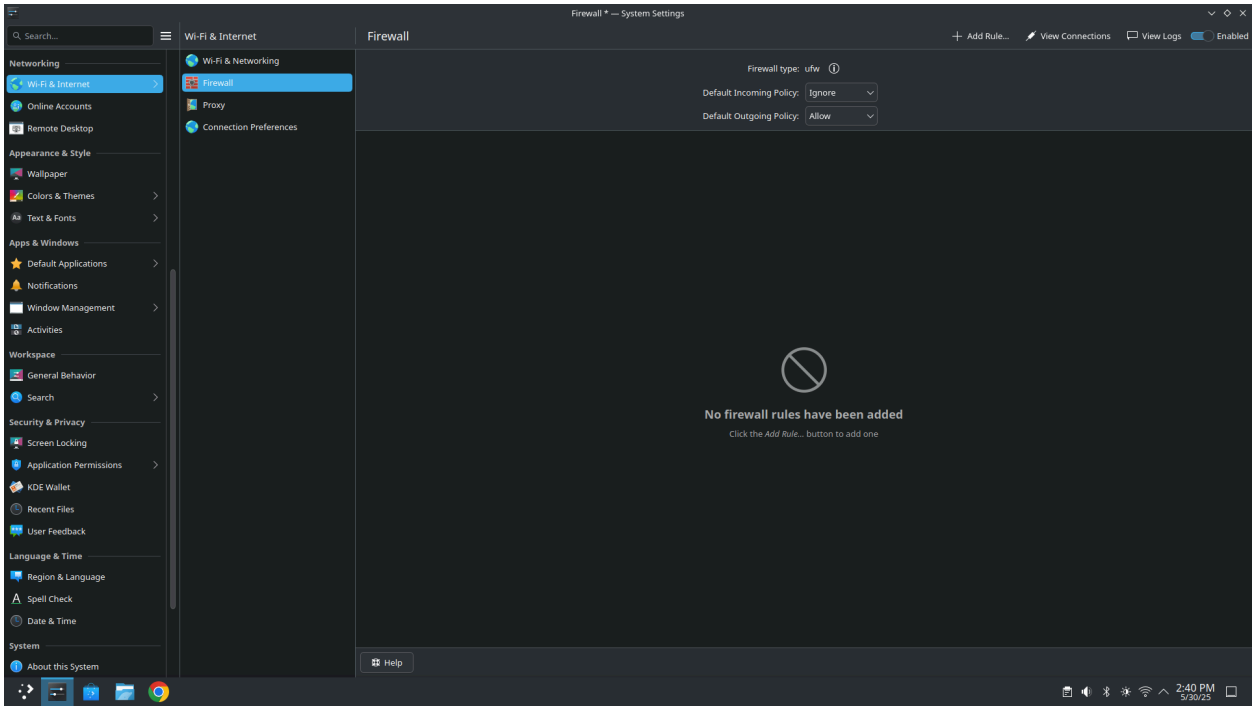
Firewall * — System Settings
Search...
Wi-Fi & Internet
Firewall
Add Rule...
View Connections
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KDE Wallet
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User Feedback
Language & Time
Region & Language
Spell Check
Date & Time
System
About this System
Wi-Fi & Networking
Firewall
Proxy
Connection Preferences
Firewall type: ufw
Default Incoming Policy: Ignore
Default Outgoing Policy: Allow
No firewall rules have been added
Click the Add Rule... button to add one
Help
2:40 PM
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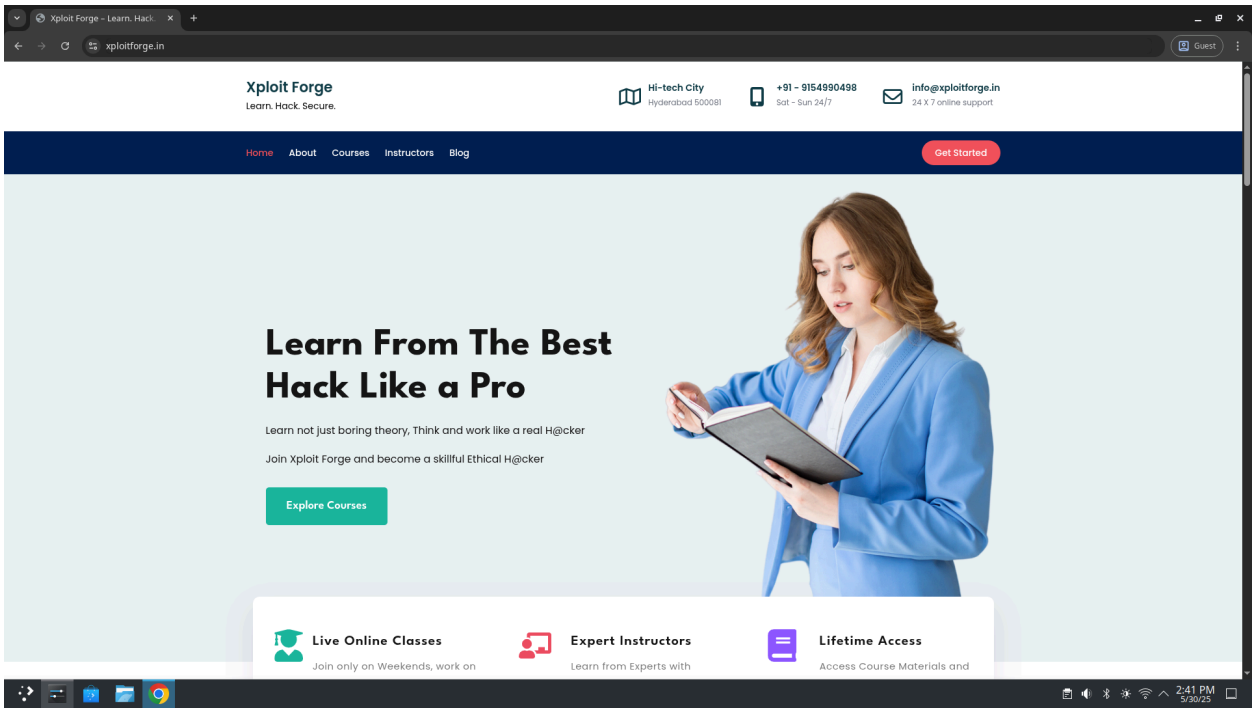
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5/30/25

Official Report: Summary of Firewall Traffic Filtering in KDE

Date: May 30, 2025
Prepared by: [Your Name or Organization]
Subject: Overview of Firewall Traffic Filtering in KDE Desktop Environments

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1. Introduction

This report provides a concise overview of how firewall traffic filtering is implemented and managed within the **KDE (K Desktop Environment)**. While KDE itself does not perform packet filtering, it provides user-friendly graphical tools to configure and manage system-level firewall services.

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2. Firewall Integration in KDE

In KDE environments, firewall functionality is typically provided through the use of the `plasma-firewall` package. This utility acts as a graphical front-end to established Linux firewall backends, primarily:

- `ufw` **(Uncomplicated Firewall)** — common on Ubuntu-based systems
- `firewalld` — used by distributions like Fedora, RHEL, and openSUSE

These services are built on top of core packet filtering frameworks such as `iptables` or `nftables`.

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3. Traffic Filtering Mechanism

The firewall in KDE filters traffic based on a set of user-defined or system-defined rules. The core steps are as follows:

1. **Packet Inspection:**
    - Each network packet is inspected for key attributes including:

        - Source and destination IP address
        - Port number
        - Transport protocol (e.g., TCP, UDP)

2. **Rule Matching:**
    - Packets are evaluated against firewall rules configured via `plasma-firewall`.
    - Rules define whether to **allow** or **deny** specific types of traffic based on the above attributes.
3. **Stateful Inspection (where supported):**
    - The firewall may track connection states and only allow packets that belong to recognized and established sessions.
4. **User Control via KDE Interface:**
    - KDE users can easily manage firewall rules (enable/disable services, open/close ports) through the graphical settings panel, without requiring direct terminal access.

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4. Conclusion

While KDE does not implement firewall functionality directly, it enhances usability by integrating graphical tools for managing system-level firewalls. This integration allows users to effectively control network access, improving both system security and user experience.

For environments requiring stricter control or advanced firewall capabilities, KDE's tools can be supplemented with command-line utilities or enterprise-level network security solutions.