IronCurtain

WEB Gateway by WASD

Ceng 491 Senior Project
Who we are?

- Gokdeniz Karadag
- Kaan Kahraman
- Dogacan Guney
- Furkan Kuru
- Mustafa Coskun
What is this about?

1. Problems in Web Usage
2. Existing Solutions
3. IronCurtain’s Approach
4. IronCurtain’s Details
5. What is Next
Problems in Web Usage

- User Distraction
- Hostile Actions
- Leakage of Sensitive Information
- Bandwidth and Resource Misuse
Existing Solutions

- Aladdin eSafe
- WebSense
- Willow
- WebCleaner
IronCurtain’s Solution

...PLUG-INS...

Because

- Internet and threats evolve
- New control needs arise
- New capabilities are needed
IronCurtain’s Core Abilities

• **Extendibility**
  • Extensive usage of plugins
  • Easily add new plugins

• **Portability**
  • Architecture independent
  • OS independent

• **Performance**
How IronCurtain Works
Main points of IronCurtain

- Core Proxy
- Plugin
- Configuration
- Parser
- Connection
- Web Interface
- WASD
What are Plugins

- Plugins are mechanisms
  - Define templates of “rules”

- Rules are actions

- Any kind of action possible
  - Accept, Block, Redirect
  - Change content (Headers, Body etc)
  - Consult a Database
  - ...

WASD
What can IronCurtain do?

- Keyword based filtering
- White-list Black-list approach
  - Defined by the administrator
  - Updated over Internet
- Block images, Flash, ActiveX, Javascript
What can IronCurtain do?

- Anonymizing

- Sanitizing annoying web pages
  - Pop-up windows, blink and marquee tags

- Control bandwidth usage

- Optimize images to save bandwidth
Under The Hood

- Complete HTTP/1.1 support
- HTTPS support
- Secure User Authentication
- Complete configuration over Web
Under The Hood (Cont.)

- Plugin-based architecture for rules
- Multi-threaded implementation
- Extensive logging
- Statistical Reports using queries
Web Interfaces

IronCurtain

Manage Plugins & Rules

Select User Or Group

Active Rules

Inactive Rules

Add New Rule

Add New Plugin
Web Interfaces

IronCurtain

Manage Users & Groups

Users

Nurettin Yilmaz
Thomas Anderson
Nurettin Kahraman

Group

Assign to Group

Group Name

Add New Group

Add New User

Web Interfaces

IronCurtain

Manage General Settings

General Gateway Settings

Port

Hostname

Administrators

Nurettin Yilmaz

Thomas Anderson

Nurettin Kahraman

Deactivate IronCurtain
Development Environment

- Python programming language
- Eclipse (with PyDev plugin)
- Python’s Libraries
- GNU/Linux and Windows
What is next?

- Final Design Report
- Implementation of the ‘Core’ proxy
- Basic Plugins
  - Keyword filtering
  - Header replacement
Contact Information

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Thank you for listening.

Questions ?