Princeton University
Library Gateway

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1. Problem

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• Princeton University (PU) and IAS
  – Agreement between PU and IAS
  – PU Library Subscriptions
  – IAS Library Subscriptions
  – Availability to IAS campus/resnet
  – Availability off of IAS and PU campus
Current Issues

- Difficult to use
- Unreliable
- Breaks integrity of some web sites
- Requires remote authentication of users
- Not “ours”
Solution Overview

• Create a Gateway
  – Redirect all user web traffic (port 80) to a central gateway at IAS
  – Gateway determines if PU subscribes to the website
    • If so, redirect web traffic to PU
    • If not, connect directly to website
  – Redirection is transparent to user
Solution Overview

• Traffic redirected to PU
  – Appears like a PU user to the website
  – Allows access for IAS IP subscriptions

• Traffic sent directly out of IAS
  – Appears like an IAS user to the website
  – Allows access for IAS IP subscriptions

• Either route changes the source IP address of the workstation
Implementation

• Two servers at IAS in BBC4
  – Each Server runs 4 campus and 4 resnet/wireless VM gateways
  – Total, 16 gateways for Web traffic
• Two servers at PU Library
• OpenVPN connects 18 servers – VLAN11
  – Secure communication over Internet to PU
  – Protects Confidentiality and Integrity
Implementation

- All 18 servers run squid proxy
- IAS servers determine web routing
  - URL Based
  - List given to us by PU on a daily basis
    - Currently 14,897 entries
    - 2 ssl and 4 non standard port
- Highly redundant for speed and reliability
- Available to VPN clients
Princeton Library Web Gateway Design

File: pulibproxy.odg
Date: 2009-08-06
Version: 0.3
Future

- Frontend for Librarians
  - Pick and choose URLs to forward to PU
  - Daily update of resources
- VPN Project for off campus access
- https and non port 80 availability
  - Proxy PAC files
Questions?