Filling the Gap
Between Vendor & User Practice

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What gap?

- Vendors restrict access to licensed resources by institutional IP address.
- Libraries are providing proxy servers or virtual private networks to fill the gap.
- Many institutional affiliated users use computers without an institutional IP address.
Why is the gap important?

- Users want personal control, self-sufficiency, & remote, easy, convenient access
- At least half of academic work is remote use
- Low service adequacy gap (perceived – minimum)
- Large service superiority gap (desired – perceived)
- Users perceive licensing restrictions as barrier to successful use of library resources

Outsell, OCLC: LibQual+
July 2002 CLIR Survey of Proxy Server & VPN Use

- DLF, ULG, & Oberlin libraries
- 55% response rate
- 92% run a proxy server
- 30% run or are testing VPN

<table>
<thead>
<tr>
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<th>Proxy Server</th>
<th>VPN</th>
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<tbody>
<tr>
<td>46% Liberal arts colleges</td>
<td>85%</td>
<td>18%</td>
</tr>
<tr>
<td>30% Private universities</td>
<td>100%</td>
<td>38%</td>
</tr>
<tr>
<td>13% Public universities</td>
<td>100%</td>
<td>31%</td>
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<tr>
<td>6% Other</td>
<td>75%</td>
<td>75%</td>
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</tbody>
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Proxy Server Implementations

- 65 implementations
  - 62% implemented by libraries
  - 54% implemented by central IT
  - 2% outsourced
- 11 different products
  - 37% run Ezproxy
  - 11% run Squid
  - 9% run Innovative
  - 8 others named, each with 1-5 implementations

![Bar Chart]

- Unspecified
- Other
- Innovative
- Squid
- Ezproxy
VPN Implementations

- 16 implementations + 5 implementing or testing
  - 14% implemented by libraries
  - 95% implemented by central IT organization

- 5 different products
  - 43% Cisco
  - 4 others named, each with 1 implementation
Problem Frequencies

- **47%** weekly or daily proxy server problems
- **7%** weekly or daily VPN problems – caution!
Problem Types

- Service times out
- Poor performance
- Supporting different servers
- Service unavailable
- Maintaining scripts
- Supporting different browsers
- Troubleshooting

Percentage
Other Problems

- Proxy server
  - User errors - 15%
  - Proxy configuration - 11%
  - Vendor changes - 6%
  - Firewalls - 6%
  - ISPs - 2%
  - Complexity - 2%

- VPN
  - ISPs - 13%
  - Administration - 6%
  - User errors - 6%
  - Marketing - 6%
  - Cost - 6%
  - Macintosh - 6%
Vendor Problems

- Most frequent
  - ISI Web of Science
  - Elsevier Science Direct
  - ProQuest

- Most difficult
  - ISI Web of Science
  - Lexis Nexis
  - IEEE
  - NetLibrary
  & Proquest
Problem Reporting & Solving

- Over 50% is not very well organized.
- 7% said downright haphazard.
Problem Reporting

- Time to problem discovery varies
- Only 13% said find out within hours
- Email or phone calls from users or librarians
- Only 10% said find out via automatic message

Help Desk Time

- 15% said spend 20% - 40% of help desk time
- 4% proxy sites spend 70% - 90% of time
Time Explaining to Users

- 73% said spend < 5 hours per month
- 14% spend 1 to 3 days per month
- 10% spend > 3 days per month
 Proxy Server Staff Time

- 60% said spend < 1 day per month
- 25% T - 19% NT spend 1 to 3 days per month
- 3% T - 5% NT spend > 3 days per month

<table>
<thead>
<tr>
<th>Time Category</th>
<th>Tech</th>
<th>Non-Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>No library staff do this</td>
<td><img src="image" alt="Chart Section" /></td>
<td><img src="image" alt="Chart Section" /></td>
</tr>
<tr>
<td>Don't know</td>
<td><img src="image" alt="Chart Section" /></td>
<td><img src="image" alt="Chart Section" /></td>
</tr>
<tr>
<td>&gt;20 hours per month</td>
<td><img src="image" alt="Chart Section" /></td>
<td><img src="image" alt="Chart Section" /></td>
</tr>
<tr>
<td>11-20 hours per month</td>
<td><img src="image" alt="Chart Section" /></td>
<td><img src="image" alt="Chart Section" /></td>
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<tr>
<td>6-10 hours per month</td>
<td><img src="image" alt="Chart Section" /></td>
<td><img src="image" alt="Chart Section" /></td>
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<tr>
<td>0-5 hours per month</td>
<td><img src="image" alt="Chart Section" /></td>
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VPN Staff Time

- 60% Tech - 47% Non-Tech said spend < 1 day per month
- 33% spend 1 to 3 days per month
- Substantial library time for IT implementations
Annual Staff Costs

- 55% said spend ≤ $5000 per year
- 20% said spend > $5000 per year
- 7% said spend > $10,000 per year
- 6% said spend > $15,000 per year

13% said no staff costs
Negative Impacts

- No impact
- Other impact
- Lower staff morale
- Less effective resource allocation
- Delay other projects
- Lower service quality
- Lower user satisfaction

Percentage
Negative Impacts

- Proxy
  - No impact
  - Other impact
  - Lower staff morale
  - Less effective resource allocation
  - Delay other projects
  - Lower service quality
  - Lower user satisfaction

- VPN
  - No impact
  - Other impact
  - Lower staff morale
  - Less effective resource allocation
  - Delay other projects
  - Lower service quality
  - Lower user satisfaction

Percentage
Satisfaction

- 64% proxy always or usually satisfied
- 37% proxy dissatisfied or seldom satisfied
- 54% VPN always or usually satisfied
- 45% VPN dissatisfied or seldom satisfied

More satisfied with proxy server
Dissatisfaction is more intense with proxy server
Motivations to Change

- Personnel to train users
- Technical training
- Personnel to implement
- Documentation
- Money to implement
- Time to implement
- Rapid, transparent transition
- Many vendors adopt
- Confidence in improvement
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Other Requirements

1. No user training, client installation, or browser or machine configuration
2. Easy set-up & maintenance
3. Integration with campus authentication & authorization services

Other
- Reliable online support or support by central IT
- Support by all vendors
- Consensus from users
80% have or are working on LDAP.
72% have or are working on SSO
Conclusions

- Proxy server & VPN support are problematic & expensive.
- Nevertheless, many libraries are satisfied.
- Change will require a robust, widely adopted technology that takes little effort to implement, maintain, & use.
Research Question

- Why are libraries satisfied with investing in remote access services that
  - Lower user satisfaction
  - Lower service quality
  - Cause delays in other projects
  - Lead to less effective allocation of resources

- Why are libraries satisfied when users are not?
Thank You

- DLF Forum audience
- Deanna Marcum & CLIR
- Peter Brantley
- Dale Flecker