Information Security: *The Next Frontier*

Jayshree Ullal

Senior Vice President
Data Center, Switching & Security Technology Group
Today’s Agenda

- Cisco SDN Strategy
- Information Security Trends
- Messaging Security Demo
- Summary
Self Defending Networks of the 21st Century

Moving From...
- Desktop AV/Signatures
- Basic Firewalls/IDS
- Static Transport (VPN)
- Basic Management
- Disparate Applications

Moving To
- Behavioral / Trusted Clients
- Adaptive Threat Defense (ATD)
- Trusted Domains of Security
- Correlation and Containment
- Application Security
Application Security

Email

Web

Video

IM

Threat detected

xTTP Inspection Engine
Application Security View

- **Ease Of Use**
  - Default protection profiles to manage common threats
  - Provide application categories and hide protocol information

- **Application Security Lockdown**
  - Similar to AutoSecure and SDM Router Lockdown

- **Leverage**
  - Common user interface to configure Application Security for Cisco security management applications

- **Leadership**
  - Competitive differentiation
Beyond Worms and Viruses

Point Products are Good

Self-Defending Networks
The Value of Cisco’s SDN Strategy
Today’s Agenda

- Cisco SDN Strategy
- Information Security Trends
- Messaging Security Demo
- Summary
Messaging has evolved from primarily email ...
... to an integrated messaging environment

**Internet**

**Extended enterprise**
Sharing presence, identity, and authentication with partners

**IM security**
IM Server

**Email security**

**Web security**
Collaboration Server

**IPT security**
IP Telephony
Message volume increasing exponentially

Worldwide Enterprise Message Volume (in billions)

Source: Radicati Email and IM reports, 2005; email message volume excludes spam, IM volume includes EIM and enterprise use of public IM

- Real time messaging is a key growth engine
- Conferencing apps bring together IM, VoIP, and info sharing
Spam is a Threat Vector that Necessitates Over Provisioning

Corporate spam volume is growing **160%** faster than legitimate mail

“A recent outbreak of spam is causing us to look at our Mail Server deployments and over provision to maintain critical customer response time guarantees” – IT Manager for a larger enterprise

Source: Radicati; Spam growth rate based on 2005-2009
Trust is a foundational requirement

Today

- Sending domain asserts identity
- Internet
- Asserted identity can be spoofed

Where we need to be

- Preserve openness of email
- Open, standards-based approach
- Minimal adoption barriers
- Trusted messaging
DomainKeys Identified Mail: An important step towards trusted messaging

- Standards-based approach to email authentication
- Security considerations carefully scrutinized
- Easy integration with today’s infrastructure
- Broad support from open source and commercial vendors

<table>
<thead>
<tr>
<th>Jun 05</th>
<th>Nov 05</th>
<th>Jan 06</th>
<th>1H 06 +</th>
</tr>
</thead>
</table>
| Merger of Yahoo! and Cisco email authentication proposals announced | IETF BoF session on chartering working group | DKIM IETF Working Group chartered | • Continued work under IETF  
• Third-party product announcements supporting DKIM  
• Strong enterprise and ISP/ESP support |
Collaborative industry partnership to drive adoption

- **Broad ecosystem of leading players** working to make authentication a key part of solutions to combat phishing, spam, and identity spoofing.

<table>
<thead>
<tr>
<th>Spec Development</th>
<th>ISPs and ESPs</th>
<th>Infrastructure &amp; Reputation</th>
<th>Enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco Systems</td>
<td>Yahoo!</td>
<td>StrongMail</td>
<td>Bank of America</td>
</tr>
<tr>
<td>PGP</td>
<td>MSN</td>
<td>IronPort Systems</td>
<td>eBay</td>
</tr>
<tr>
<td>Yahoo!</td>
<td>AOL</td>
<td>CipherTrust</td>
<td>Fidelity</td>
</tr>
<tr>
<td>IBM</td>
<td>EarthLink</td>
<td>port25</td>
<td>Charles Schwab</td>
</tr>
<tr>
<td>Sendmail</td>
<td>Sify</td>
<td>proofpoint</td>
<td>Cisco Systems</td>
</tr>
<tr>
<td>VeriSign</td>
<td>CheetahMail</td>
<td>ReturnPath</td>
<td>Yahoo!</td>
</tr>
<tr>
<td></td>
<td>DoubleClick</td>
<td>Habeas</td>
<td></td>
</tr>
</tbody>
</table>

And other members of ESTG

And many others globally

And many others globally

And many others globally
Today’s Agenda

• Cisco SDN Strategy
• Information Security Trends
• Messaging Security Demo
• Summary
Today’s Agenda

- Cisco SDN Strategy
- Information Security Trends
- Messaging Security Demo

- Summary
Cisco: Enhancing Internet Trust

• Cisco is key partner with industry leaders to address messaging security

• Part of our commitment to Self Defending Networks

• Our goal: Enhance trusted Internet communications and commerce