Endpoint Intrusion Prevention

How Cisco IT Uses Intrusion Prevention to Protect User Endpoint Devices

A Cisco on Cisco Case Study: Inside Cisco IT

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Overview

- Challenge:

  Protect individual assets like PCs and handhelds at the desktop level, to cut costs of virus remediation and associated loss of productivity

- Solution:

  Deploy Cisco Security Agent to 37,000 Windows desktops

- Results:

  Met challenge, and reaped rewards in April 2004, when 99.86% of protected computers escaped infection from the bagle.aa virus

- Next Steps:

  Make policy stricter and deploy on internal and customer-facing Windows 2000 servers

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Challenge: Protect assets, reduce costs

- Reduce time and expense of remediation of growing numbers of viruses and worms

  Cost of virus remediation and associated loss of productivity was $28 billion in 2003 and will rise to $75 billion in 2007 (source: Radicati Group, 2003)

- Protect individual assets like PCs and handhelds at the desktop level

  Desktop not specifically addressed by Cisco PIX® Firewalls, Cisco NIDS, and anti-virus software

- Protect employee productivity by ensuring the solution doesn't interfere with normal work habits

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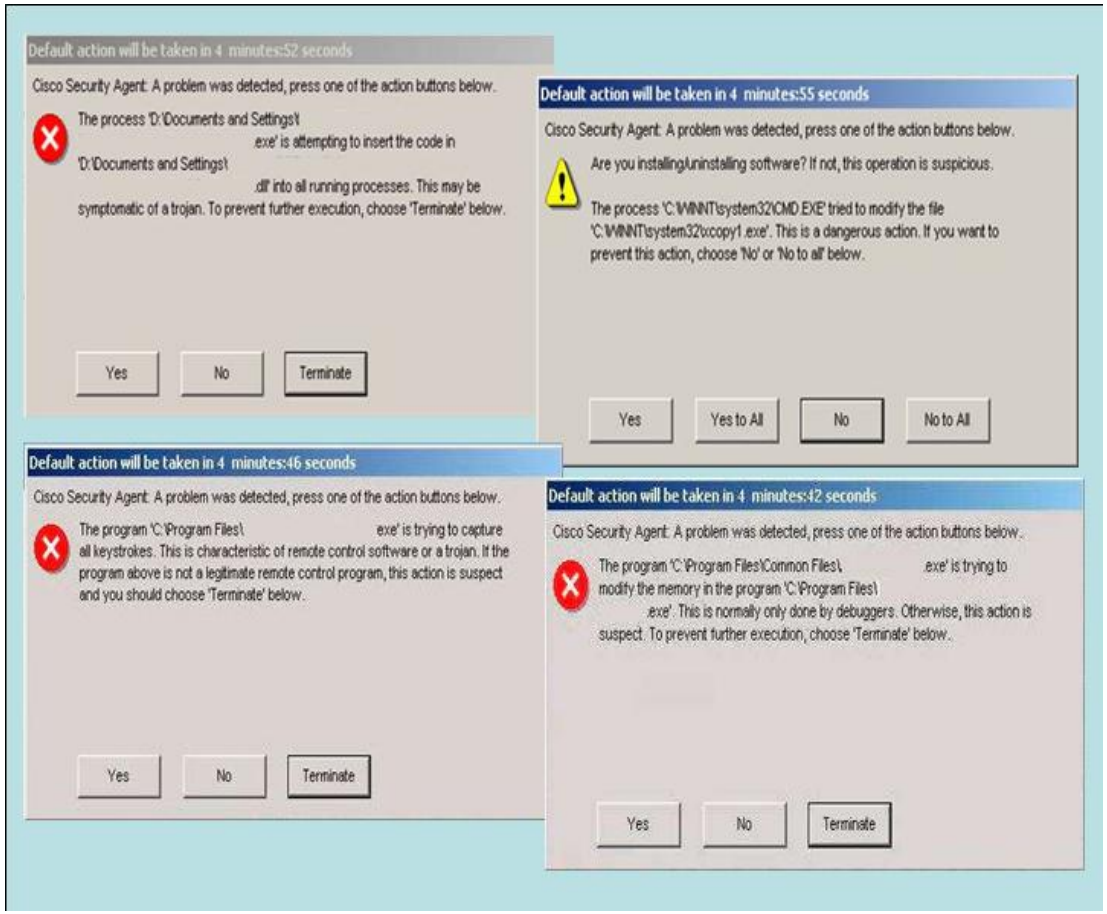
Solution: Deploying behavior based defense

- Deploy Cisco Security Agent on employee desktops

  "Behavior-based" rather than "signature-based" protection

- Develop application behavior policies

  When application behavior deviates from the norm, allow it, deny it, or query the user



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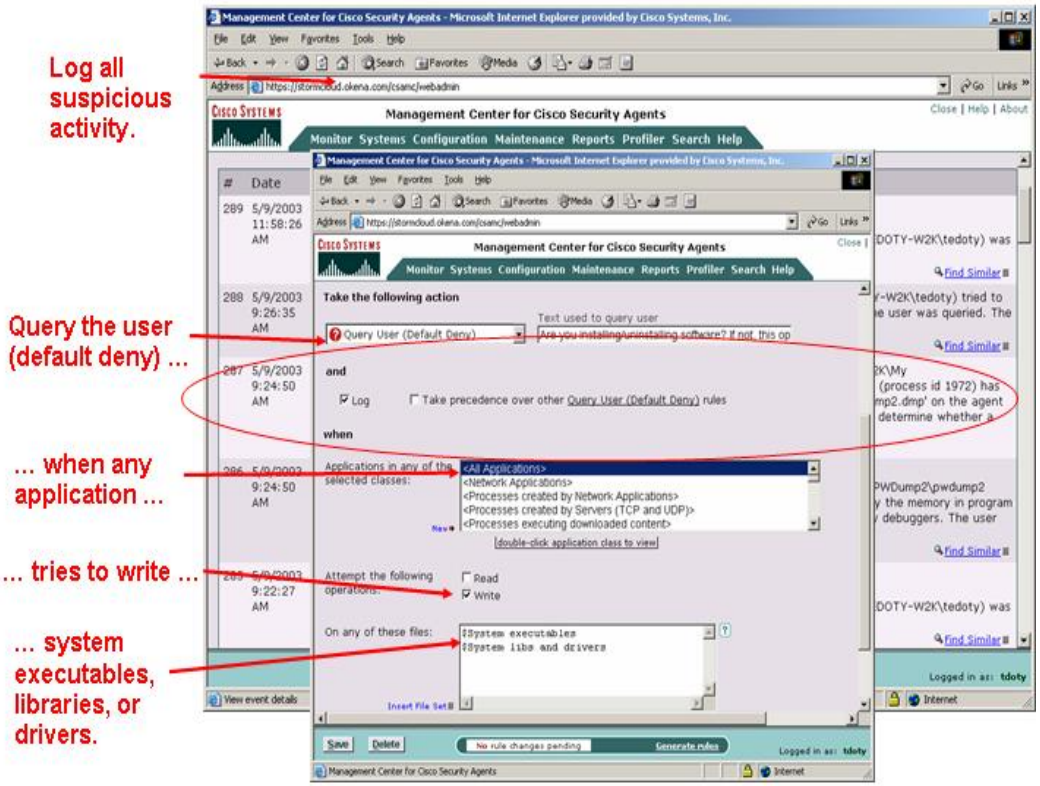
Solution: Define Policies, Deploy Globally

- Fine-tune policies during a 500-user pilot

  Strike a balance between protection and employee convenience; minimize number of queries about allowing application behavior

- Push software to all employees globally
- Educate users on desktop security and effective use of Cisco Security Agent



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Results: Increased Security, Reduced Cost

- Slashed costs associated with virus and worm remediation
- Increased employee productivity by slowing virus progress
  - Even with very liberal policies chosen for roll-out
- Detected previously-infected systems

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Results: Thwarting the bagle.aa Virus

- Virus struck in April 2004
- No time to patch or update .DAT files
- Of 38,370 desktops running Cisco Security Agent, over 600 could have been compromised – 620 users opened the infected file
- Cisco Security Agent kept all but 54 people from releasing the virus, by warning them of suspicious activity (rewriting the registry)

  Infected users had clicked “Yes” when warned that a suspicious application was trying to access e-mail resources

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Results: Thwarting the bagle.aa Virus (Contd.)

- This 90% reduction made cleanup much easier and less costly
  - Also resulted in steps to improve policy to reduce user ability to open this kind of file

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Next Steps: Summary

- Make policy stricter
- Use network admissions control (NAC) to restrict network access to employees who have installed Cisco Security Agent
- Install Cisco Security Agent on internal and customer-facing Windows 2000 servers
  - Including Cisco Call Manager and Cisco Unity software
- Assemble comprehensive view of network general health by combining information from Cisco Security Agent and Cisco Network Intrusion Detection Systems (NIDS) and sending to Cisco Works VMS/SecMon or Cisco Security Information Management System

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Lessons Learned: Summary

- Take your time with policy testing
- Conduct the pilot with a broad variety of people and applications
- Educate users, who sometimes must decide whether to allow or deny application behaviors

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