

Defending Laptops with MinUWet



By Erick Engelke

Laptops and our future?

- laptops now outsell desktops
- we expect continued growth of laptops
- laptops present new opportunities for learning and budgets, but also new IT staff challenges
- laptop security issues are time-consuming for staff

Solution:

We need a strategy which encourages responsible client laptop management

Continuum of Security

none - anarchy

available but optional

encouraged / accessible

heavily enforced

Accessible Security?

- **make technology simple to conceptualize though not necessarily understand**
- **it becomes part of the culture**
- **examples:**
 - **privacy of PIN numbers on debit cards**
 - **security of SSL web sites**

How to Encourage Security

- Educate
- Reward

or

- Remind
- Nag
- Embarrass
- Punish

Possible Education Points

1. secure your computer

- Antivirus, Workstation Firewall, Updates, ...

2. secure your applications

- MyWaterloo, SSH, Secure IMAP, VPN

3. secure yourself

- best practices, (strong secret passwords), avoid probable malware

users can conceptualize these points, but will they act?

MinUWet

Setting minimum standards

- NAA detects OS at login screen
- highly vulnerable OS's must endure a scan using MinUWet (currently only MS Windows)
 - Antivirus enabled and up-to-date? Freshen!
 - OS getting patches?

MinUWet

Setting minimum standards (cont.)

- NAA detects OS at login screen
- highly vulnerable OS's must endure a scan using MinUWet(currently only MS Windows)
 - Antivirus enabled and up-to-date? Freshen!
 - OS getting patches?
- HTTP always allowed, download patches
- pass test... get additional or “*premium*” network access

MinUWet

Setting minimum standards (cont)

- other OS's are not affected
- users who do not wish to participate are granted web-only access
- will still do existing security scans and SNORT
 - complementary solutions add more security

Some MinUWet Facts

- idea is similar to Cisco NAC and MS NAP
- MinUWet is compatible with all existing hardware and safe with non-MS OSs.
- local expertise, we can adapt it
- Cisco and MS solutions are stronger but more difficult to run and inflexible
- MinUWet doesn't have to be hack-proof, it just has to be better than today's mess!
- MinUWet - retired upon better options

Statistics from Two Week Engineering Trial

- **6486 NAA Windows sessions**
 - 3161 or 49% of sessions ran MinUWet
- **628 distinct users ran MinUWet**
 - 168 or 26% of them failed the test initially
- **75 or 45% of those who failed later passed.**
 - this indicate users upgraded their systems
- **zero security threats observed by IST**

Campus-wide Rollout

- Thursday March 2nd
 - “help desks” co-ordinate information sharing
- Friday March 3rd –
 - appears in Daily Bulletin
 - brief message appears at each wireless user login
 - both messages point to a web site where users can learn more and test their laptops (<http://minuwet.uwaterloo.ca>)
- Thursday March 16th
 - MinUWet goes live and enforces user security

UW Network Authentication Appliance - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites

Address <http://maggot.uwaterloo.ca/login/> Go Links >>

University of Waterloo Authenticated

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Authentication Page

Wireless Help

What's New

UW Network Authentication Application

Userid: erick

IP address: 129.97.99.221


MAC address: 00:02:b3:c0:52:87

You have successfully completed the login process.

Effective March 17, 2006, all wireless MS Windows clients will be required to use MinUWet in order to be granted more than HTTP/HTTPS (web) access. To learn more, visit [this site](#)

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Done Internet

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What's New

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Userid: erick

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You have successfully completed the login process.

You now have limited web-only access (http and https). To enable additional protocols, you must first run MinUWet.

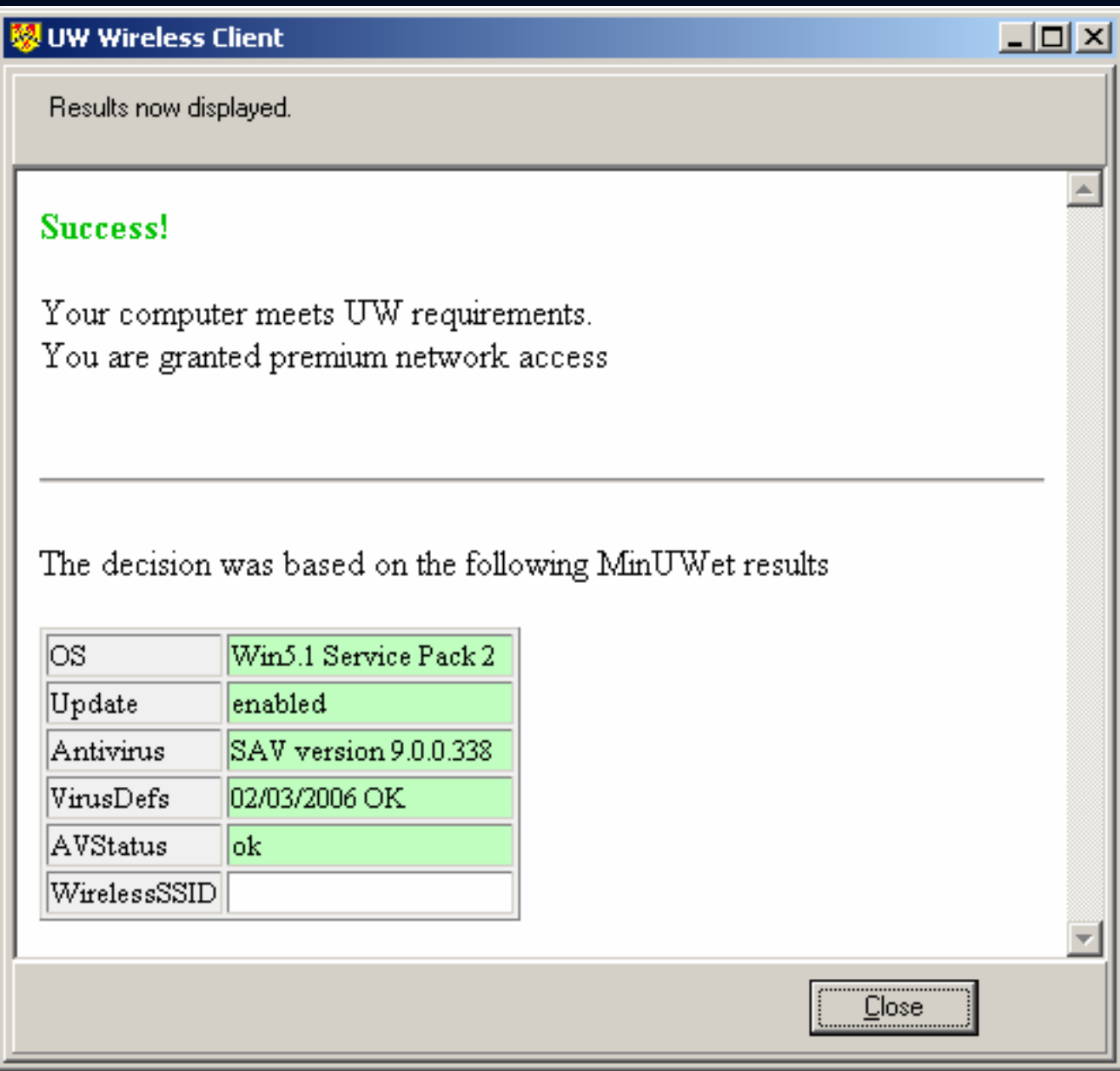
Yes, please Help me decide No, thanks

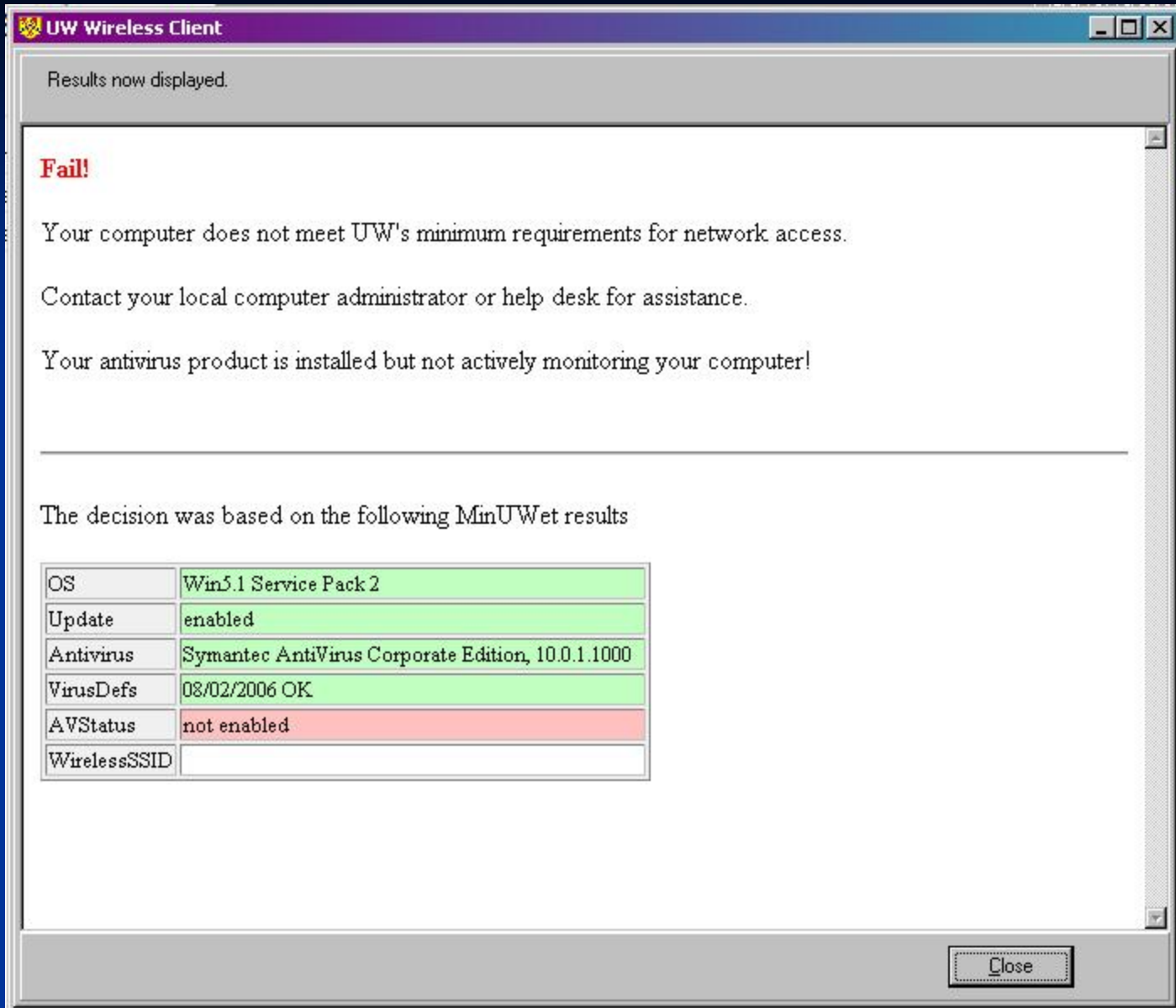
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Thank you