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Malware: What it is, how it works



One of the biggest problems plaguing computer users around the globe today is malicious software (malware). Malware has evolved over the years: it started with code that was transferred from computer

to computer by floppy disks before the Internet was widely used. With the advent of the Internet and e-mail came new avenues for malware to spread. Recently, the Pentagon computer network was hacked by a virus contained on a USB flash drive. Today's malware is more sophisticated than ever; almost every installation has a different signature, making it extremely difficult to detect and even harder

to remove. Malware can be as "harmless" as simply monitoring your Internet activity and reporting to advertising agencies, or as malicious as deleting data and causing your computer to be unusable. For example, you might see this message: "Your computer is infected with a virus! Install this software to get rid of it!" This message is actually caused by malware in an attempt to get you to pay for software to remove it.

How it infects

Malware is usually installed on computers by downloading or opening some kind of malicious file. In the past these came through e-mail attachments, though the most common method of delivery is now from websites. Websense Security Labs recently released a report which states that 77% of websites hosting malicious code are actually legitimate websites that have been compromised, including 70% of the top 100 visited websites. Usually the malware is installed when a website visitor is asked to install some kind of add-on in order to be able to view a page properly.

How to get rid of it

Traditional virus scans are becoming obsolete due to the fact that every malware installation now has a unique signature or sign that it was installed. Scans to remove malware can be exhaustive and take many hours to complete; even then, they are rarely fully successful. Many times they find part of the malware and remove it, but then it comes back on the next reboot. This is why the IAIT Helpdesk does not perform malware removal. The best option for malware removal is a computer reload: wiping the hard drive clean and reinstalling Windows. This procedure guarantees that the malware will be removed.

How to avoid it

The best thing you can do to avoid malware is to avoid installing third party extensions for your operating system, especially those for web browsers. There are some safe add-ons that are needed to view many web pages (including Adobe's Flash Player, Windows Media Player, etc). However, you should be extremely cautious about clicking "Yes" to install anything that states it is required in order to view a web page. Also, be wary of free programs such as smiley packs, games, and hardware drivers that do not come from the original manufacturer (also known as "hacked drivers").

Localmgr vs. User Account

There are two accounts that come setup on institute configured laptops: the localmgr account and user account. These two accounts have different permission levels for various security reasons. The localmgr account has administrator privileges on your laptop. This means that the localmgr account has complete access to everything on the system and can install programs. The user account is setup as a power user. A power user, in most cases, is unable to install programs, but has access to most settings and applications on the computer. The user account should be used for everyday

tasks while the localmgr account should only be used to install programs and make major changes to the Windows system.

Important!

If a laptop is brought to IAIT to be reloaded, we only restore the data in the user account.

The accounts on the laptops are setup in this manner for increased security and to lessen the impact of viruses and malware. When a virus tries to install itself in the user account, it will be denied access to critical resources, and thus it will likely have a

decreased impact, but if the same install happens in the localmgr account or the user account if it was added to the local Administrators group, it will succeed and have full control over your system. Once a virus has infected a laptop, it is very difficult and time consuming to remove.

The user account is designated for everyday use and should be where you save all your documents and program data. If a laptop is brought to IAIT to be reloaded, we only restore the data in the user account. We do not currently support the restoration of the files contained in the localmgr account's folders.

Live Meeting: Who, What, Where?

A very useful piece of Microsoft Office software is a web conferencing tool known as Live Meeting, which connects users via online meetings. This software provides audio and video based meetings, desktop and application sharing, and even the ability to collaborate on a whiteboard. Students and faculty familiar with Adobe Connect (Breeze), can use Live Meeting as an alternative. Live Meeting also allows users to save and to play back meetings at a later time. Setting up a meeting is extremely easy. The Outlook Conferencing plug-in, which is available

from Microsoft's website (see inset), allows users to schedule a meeting at a specific time and invite users in one step. The Live Meeting client will need to be installed by meeting attendees before they can attend the meeting. The client can be downloaded from the TSC website (see inset). The individual who schedules the meeting is designated as the presenter and can show what is on their computer screen, enable

audio between the attendees, and create polls for users. In addition, the presenter can allow attendees to share and edit files between the group, designate shared applications, and share the whiteboard for drawing up ideas. So the next time you have a group meeting and someone is off campus or even across the country, or you just don't want to walk to the library, consider using Live Meeting.

The Outlook Conferencing plug-in:

<http://office.microsoft.com/en-us/help/HA102368901033.aspx>

The Live Meeting client:

http://www.rose-hulman.edu/TSC/software/documentation/applications/live_meeting

Help Desk Quotes

"How do I remove all the keys from my laptop?"

"My laptop cannot swim in Chinese noodles."

"Candle wax was poured all over it."

"And when I woke up I noticed my laptop sitting in a pool of water."

"How do I get the chocolate out of my VGA port?"

Outlook On The Desktop

Keeping track of your tasks and appointments can be a tricky thing. You could keep a date book or use real or electronic Post-its, but nothing quite beats a good calendar. IAIT's enterprise calendar solution is Microsoft Outlook Calendar.

While this calendar is useful for keeping organized, it can be troublesome to do something as simple as look at it. Because it's embedded within an application that does a lot of other things, you have to click around a lot to access it. This clicking goes back and forth as you read through your email, do your other work, etc. If a calendar is going to be useful, it should be visible right away. On a computer, this means your Windows Desktop.

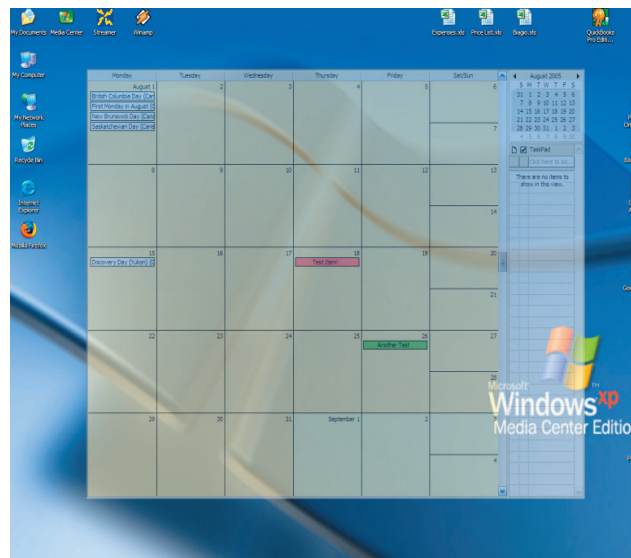
Fortunately, there is a solution for this - it's called Outlook on the Desktop. Developed by Michael Scrivo, Outlook on the Desktop (OotD) pins your Outlook calendar (and even your email inbox or task list if you like) right to your Windows Desktop. It's a fully functional extension of

Outlook - just double-click a calendar day to add a new event, task, or appointment.

For a student, the calendar can be used to place homework due dates, tests, interviews, and whatever other tasks or meetings one may need to complete. It's very handy to minimize applications

and glance at the calendar whenever one might need to.

OotD will work in Outlook 2003 or 2007 on both Windows XP and Vista and can be found at <http://www.outlookonthedesktop.com/>. Note that the Help Desk does not support this application, but support is available through the web site.



Outlook on the Desktop:

<http://www.outlookonthedesktop.com/>

Save some space!

We all love our movies, music, pictures, etc. Unfortunately, our laptops have a finite amount of space available. Windows

needs sufficient space to run properly. If you find your computer running slowly, it might be that your hard drive is too full. You

should have a minimum of 3-4GB of space free, but we recommend at least 10GB for optimum performance.

Help Desk Business hours

The Help Desk is open weekdays from 8:00 AM until 5:00 PM. For same-day service, please have your laptop to us by 3:00 PM. For same-day reloads, please have your laptop to us by 2:00 PM.