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Top 10 Things Every
IT Pro Should Know
about IE8 on
Windows® 7

Top 10 Things Every IT Pro Should Know about IE8 on Windows® 7

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Introduction

With each new version of Windows comes a new version of Internet Explorer, and in the case of Windows 7, it's IE 8. (One of these days all Microsoft's numeric product names might actually line up, although if that ever does happen, it could mean the end of the world is near.) What does the Windows 7 administrator or planner need to know about the new IE? In this short white paper we take an initial look at the following topics.

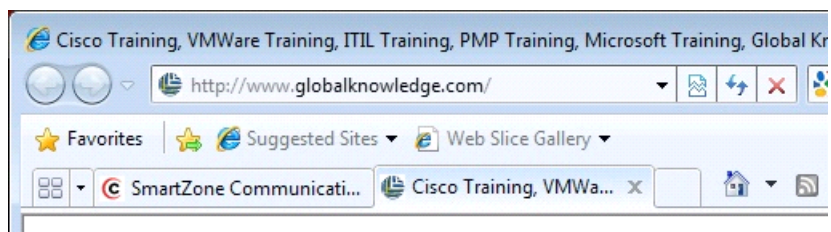
- Compatibility View
- Windows XP Mode
- InPrivate Browsing
- InPrivate Filtering
- Accelerators
- Protected Mode
- Cross-Site Scripting Filter
- SmartScreen Filter
- Group Policy Settings
- Tab-Based Extension Isolation

1. Compatibility View Settings

As usual with a new version of IE, some web sites and intranet sites don't display their pages properly with the new browser, in some cases because these sites were written with the idiosyncrasies of IE7 in mind.

Microsoft has provided something called "IE Compatibility View" to address this concern. This feature, whose torn-page icon appears on the IE8 toolbar (see Figure 1), lets a user put IE8 into an IE7-standards mode to correctly display pages written for IE7. IE remembers which domains you choose to display in compatibility view and will show them that way in the future.

Figure 1: The Compatibility View button appears to the right of the address bar.



Moving to the IE8 Tools menu, we can change the default compatibility view settings. We can add a specific website; view a list of previously-added websites; and, via some checkboxes at the bottom, change IE8's default behaviors (see Figure 2).

The first box, "Include updated website lists from Microsoft," instructs IE8 to receive lists of sites that benefit from being displayed in compatibility view. These lists come via the Windows Update facility. The second box, "Display intranet sites in Compatibility View," lets you change the default behavior for internal websites, which is for compatibility view to be turned on. And the last box lets you force compatibility view on for all websites; the default is for public Internet sites, as well as locally-stored HTML files, to display in IE8 standards mode.

As usual with Windows these days, you can make these settings for your Active Directory network by using Group Policy. If we look at the Group Policy console and navigate to User Configuration, Windows Components, Internet Explorer, and Compatibility View, we can see the various Group Policy settings so that network administrators can deploy whatever settings they think most appropriate – including specifying a list of sites that should be viewed in compatibility view.

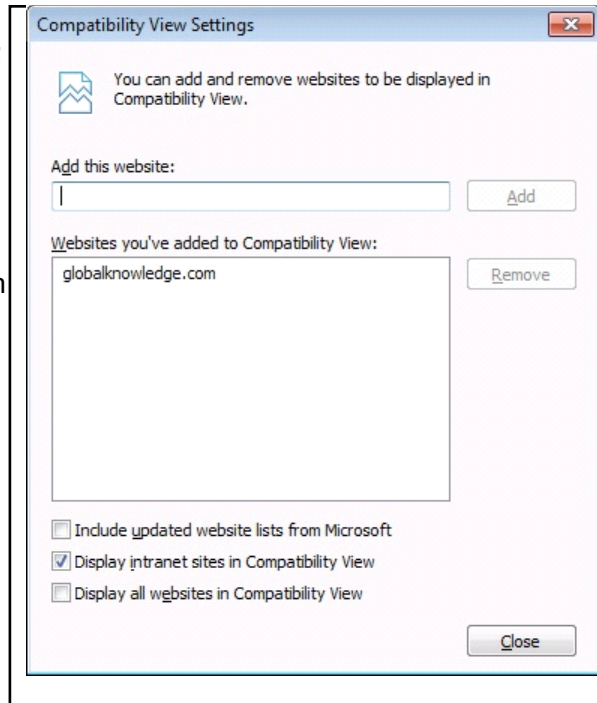


Figure 2: You can customize IE8 Compatibility View.

2. Windows XP Mode (if You Need To Go Back to IE6)

If the IE8 compatibility view doesn't solve your page-viewing problems, you can go even further back in time by running a Windows XP Mode session and executing IE6 or IE5.5 or any browser that can run under Windows XP.

Microsoft has provided Windows 7 users with a way to run a virtual Windows XP session inside of Windows 7. Microsoft calls this "Windows XP Mode" or, sometimes, "Virtual XP Mode." But it's different from the usual Virtual PC product in that you don't have to run a separate virtual machine desktop in order to run a program in Windows XP Mode, plus you don't have to buy a license for Windows XP. (Of course if you want to run a full virtual machine desktop, you can do that too.)

This capability doesn't exist "out of the box." You have to install it by downloading VirtualWindowsXP.MSI for free from Microsoft's website. It only works with Windows 7 professional, ultimate, and enterprise.

If you install a program into the Windows XP Mode environment, the program also shows up on the Windows 7 Start menu (see Figure 3). You can even move around the Start menu shortcut so that the program is positioned wherever in the menu structure you want it. Of course your old browser program won't start as rapidly as a native Windows 7 program due to the overhead of Windows XP Mode.

3. InPrivate Browsing

InPrivate browsing is an “opt-in” IE8 feature designed to prevent information about the user’s browsing activities from being stored on the local machine. When a user chooses this mode of browsing, IE8 does not store history, does not cache Web pages or page objects, does not retrieve stored cookies, does not create any permanent (“persistent”) cookies, and does not permit the use of any browser helper objects.

The IE toolbars are also disabled in this mode, to prevent any custom functionality that a third-party toolbar might have for storing user information in a way that IE8 doesn’t know about.

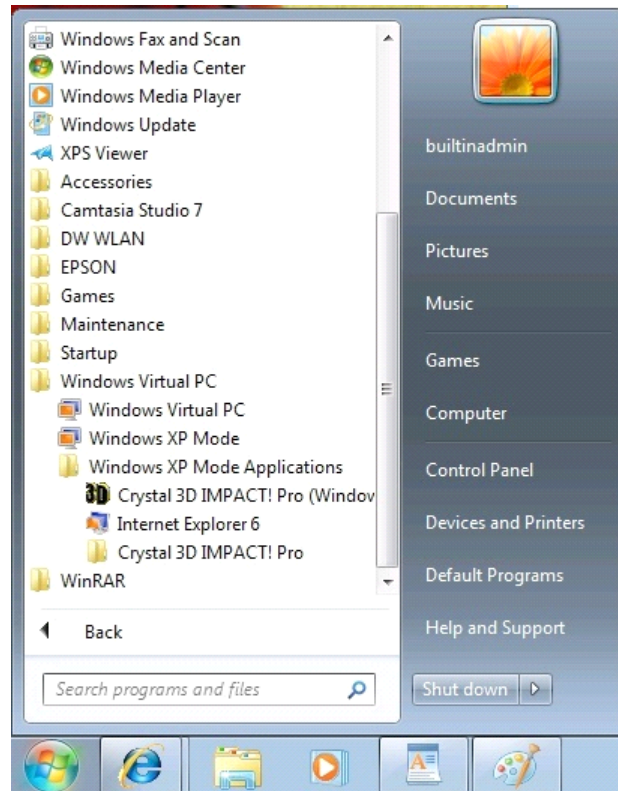


Figure 3: You can run IE6 using Windows 7’s XP Mode.

The InPrivate browsing mode is not the default behavior, but the user can select it from the Safety menu or by clicking the relevant link when opening a page in a new tab. When selected, the browser’s appearance changes (see Figure 4).

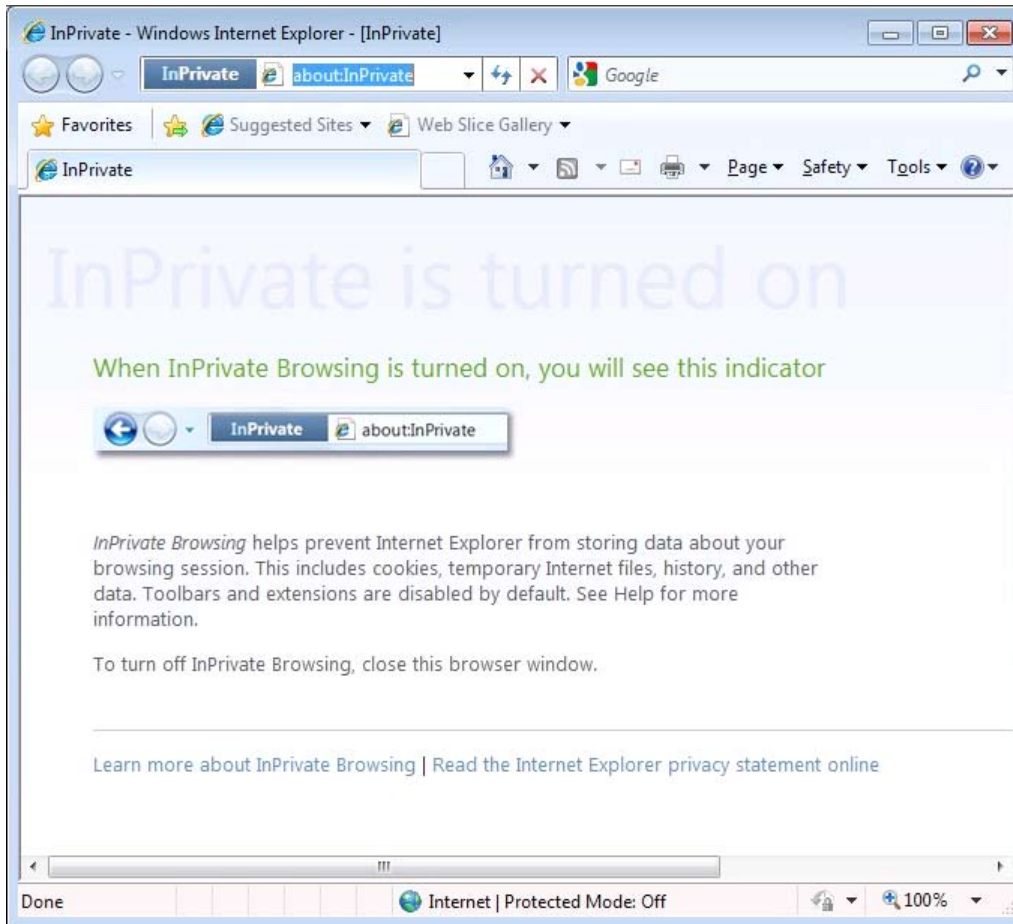


Figure 4: InPrivate browsing makes its status known by a big indicator near the address bar.

While InPrivate browsing has clear benefits for travelling users who may be using a public PC, for example at an airport, this new privacy feature is actually not an unambiguous benefit for network managers. It's handy to protect individual privacy if you have a situation where, say, multiple users work on the same PC. However, it can work against you if an employee commits a crime, sells confidential information, etc. and law enforcement has to get involved; and this mode may also reduce barriers for employees to use company systems for private purposes. You can weigh the pros and cons of InPrivate browsing and control it in your network via Group Policy.

4. InPrivate Filtering

InPrivate filtering, as opposed to InPrivate browsing, is designed to prevent websites and third-party content providers from tracking what websites and pages a user has visited, for example to create a browsing history profile in order to provide focused advertising. (The notion that blocking cookies is sufficient to disable such data gathering has become, unfortunately, quaintly naive.)

The way InPrivate filtering works is by detecting repeated content - such as, for example, one of those famous single-pixel GIF images, or a small script - across multiple visited sites (the default is 3) and giving the user the choice to block that content. You can control the settings for InPrivate filtering by clicking the icon at the lower right of the IE8 status bar and choosing "settings" (see Figure 5). (The settings are also available via the Safety menu.) These settings can also be controlled in an Active Directory environment via Group Policy.

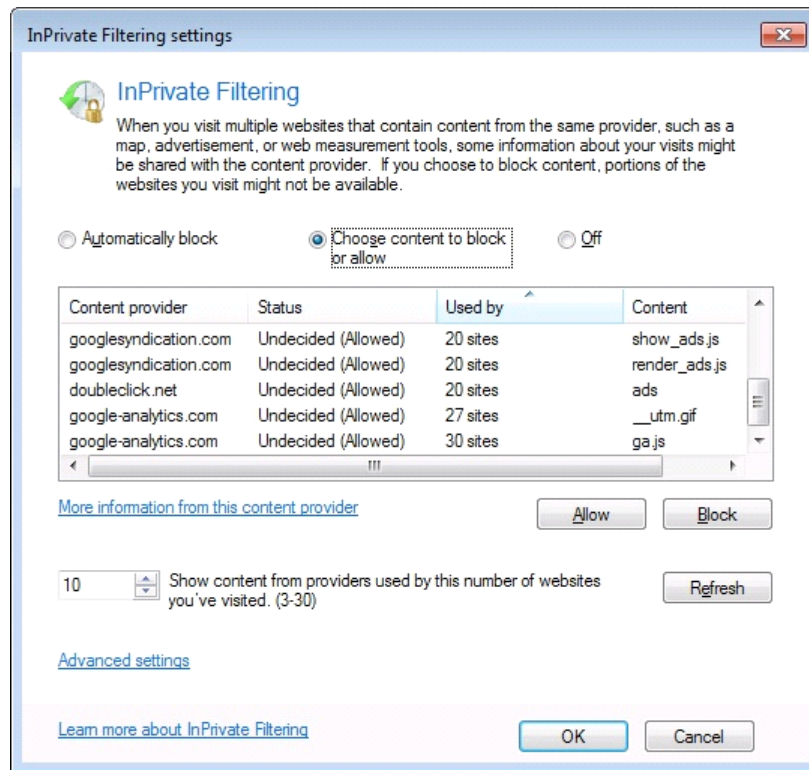


Figure 5: InPrivate Filtering settings let you block individual content providers.

5. Accelerators

Accelerators are a particular type of IE add-on that is very handy for IT pros and end users alike. They allow you to highlight a section of text on a web page and then click an "accelerator" icon (see Figure 6), which will send the highlighted text to any of several useful websites, such as a mapping service, a search service, Wikipedia, and so forth. Basically, what accelerators do is to save the user having to perform a copy operation, manually open a new tab, navigate to a service provider (e.g., search), and manually perform a paste operation.

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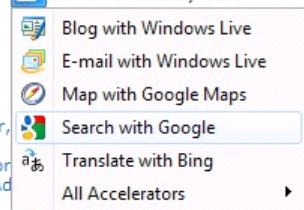


Figure 6: Click the blue "accelerator" arrow to open a new context menu.

IE8 comes with a few accelerators already installed, but there are a couple dozen that you can add by visiting the Microsoft add-ons web page. They are small and so they install almost instantaneously. You can even write your own accelerators if you want to; they're basically XML files that tell the browser what to do when you choose the accelerator.

6. Protected Mode

IE8's "protected mode" adds a level of security by putting IE into a "sandbox" so that scripts, applets, ActiveX controls, etc., hosted by IE cannot write to any part of the local hard drive except the browser cache ("Temporary Internet Files"), which is considered a "low-integrity location." What's actually happening behind the scenes is that IE8 goes through a "broker process" to interact with Windows 7.

Now technically, it's not quite correct to say that protected mode forbids any writes outside of the browser cache. It will actually redirect attempts to write to high-integrity locations. That is, Windows 7 will intercept the write operation and re-route it to a "VirtualStore" folder in the current user's profile. This redirection is known as "file and registry virtualization" and it has been around since the first release of Windows Vista.

You can't use this protected mode if you've turned off User Account Control, because Protected Mode depends on UAC. (This is also why you can't use protected mode if you install IE8 on Windows XP.)

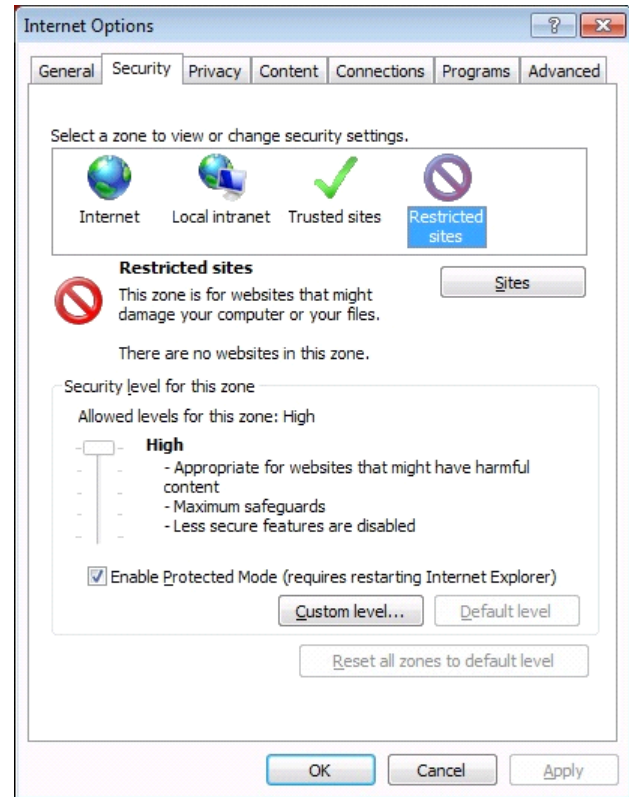


Figure 7: Protected Mode works on a per-zone basis.

Protected mode is a per-zone setting. By default, protected mode is enabled for the Internet zone and the Restricted Sites zone, and disabled for the Intranet and Trusted Sites zones. You can change the default settings interactively (see Figure 7) or via Group Policy.

7. Cross-Site Scripting Filter

Cross-Site Scripting attacks, or XSS to the cognoscenti, have become a common evil by-product of the Web's inherent mix-and-match character. They may even be more prevalent now than the buffer-overflow vulnerabilities that have received so much press over the years.

Without going into a lot of detail, suffice it to say that XSS attacks can involve the hijacking of cookies, capture of user keystrokes (including username and password information), and other nasty activities. Malicious code

can run within the security context of a page from a separate site. (Note that this is different from phishing, which IE8 addresses with the SmartScreen filter discussed below.)

The IE8 XSS filter attempts to recognize when a script has been injected into HTML from a separate site, and to neutralize that script while permitting the “safe” part of the web page to operate normally. This filter is on by default, and you can get to the setting via the custom security options for a specific zone.

8. SmartScreen Filter

IE7’s “phishing filter” has received a freshening for IE8, as well as a new name. The SmartScreen filter is reputed to be faster. The user interface is a bit more alarming, painting the address bar red if a user tries to visit a known phishing site, and it now offers to bounce the user over to his or her homepage (see Figure 8). SmartScreen also encrypts its communications with Microsoft’s databases of evil sites, and the company claims that it does not store visited site details with the user’s IP address.

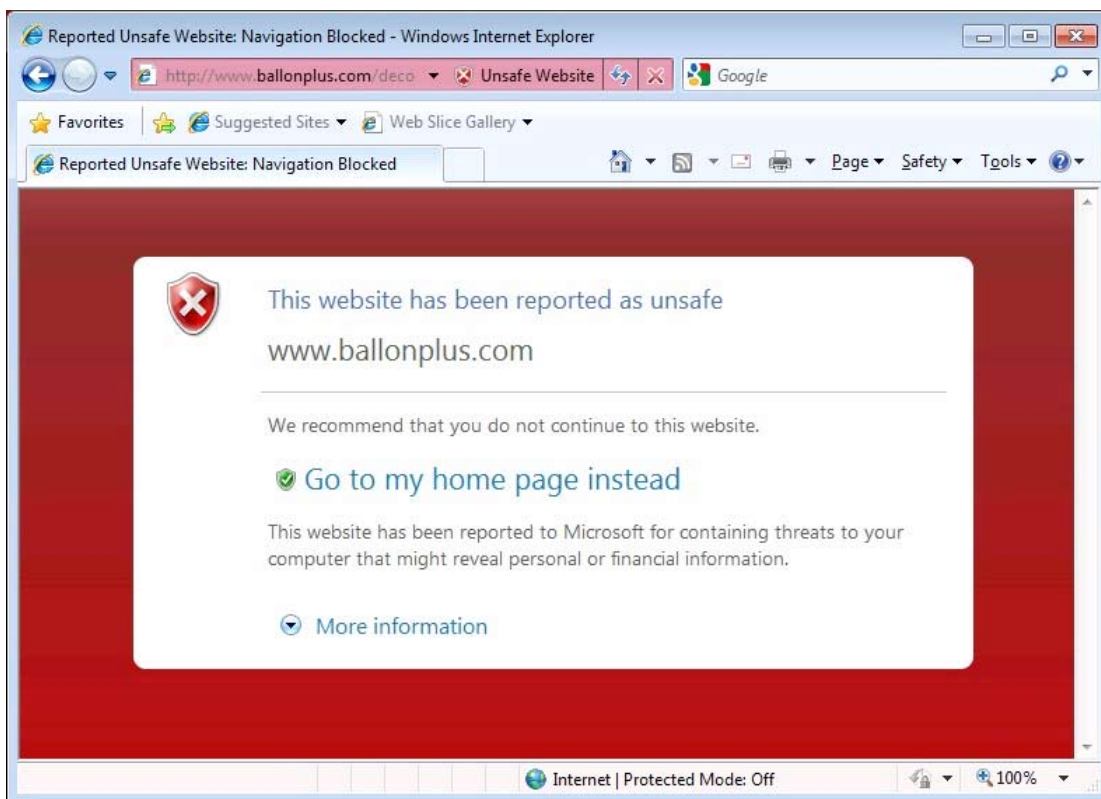


Figure 8: There’s not much doubt when SmartScreen flags a phishing site!

But perhaps more significant for the general Windows 7 user is the extension of SmartScreen beyond identity-theft detection to include malware detection. SmartScreen’s detection is URL-based, whereas the detection used by Windows Defender, Security Essentials, and most third-party products is signature-based. Given that the

Web is a major source of malware, it might not hurt to have two different protection techniques working for us. Having said that, I would never recommend relying entirely on SmartScreen - you still need conventional anti-malware and anti-virus tools.

Note that you can configure security for the Trusted Sites category to disable the SmartScreen filter for trusted sites.

9. IE8 Group Policy Settings

By now, most organizations using Active Directory have discovered the power and convenience of Group Policy for managing the Windows network. IE8 integrates with the Windows 7 client's participation in the Group Policy scheme. In fact, IE8 in Windows 7 brings more than 100 new Group Policy settings to the table.

For example, a Group Policy administrator can:

- Turn Compatibility View on or off
- Control the use of Compatibility View on intranet sites
- Specify a list of sites that should be viewed with Compatibility View on
- Disable InPrivate browsing
- Disable InPrivate filtering
- Set the default number of third-party items that will trigger InPrivate filtering
- Configure all Windows 7 clients so users can't bypass SmartScreen filter warnings
- Turn SmartScreen on or off for all users in an OU, site, or domain

Microsoft has added a number of Group Policy settings for the Favorites Bar and the Command Bar, too.

Most of the settings that Windows 7 administrators will use live in the "Administrative Templates" node of either the machine or user half of the policy console (see Figure 9). However, the Internet Explorer Administration Kit (IEAK) settings are still available in the "Windows Settings" node (see Figure 10).

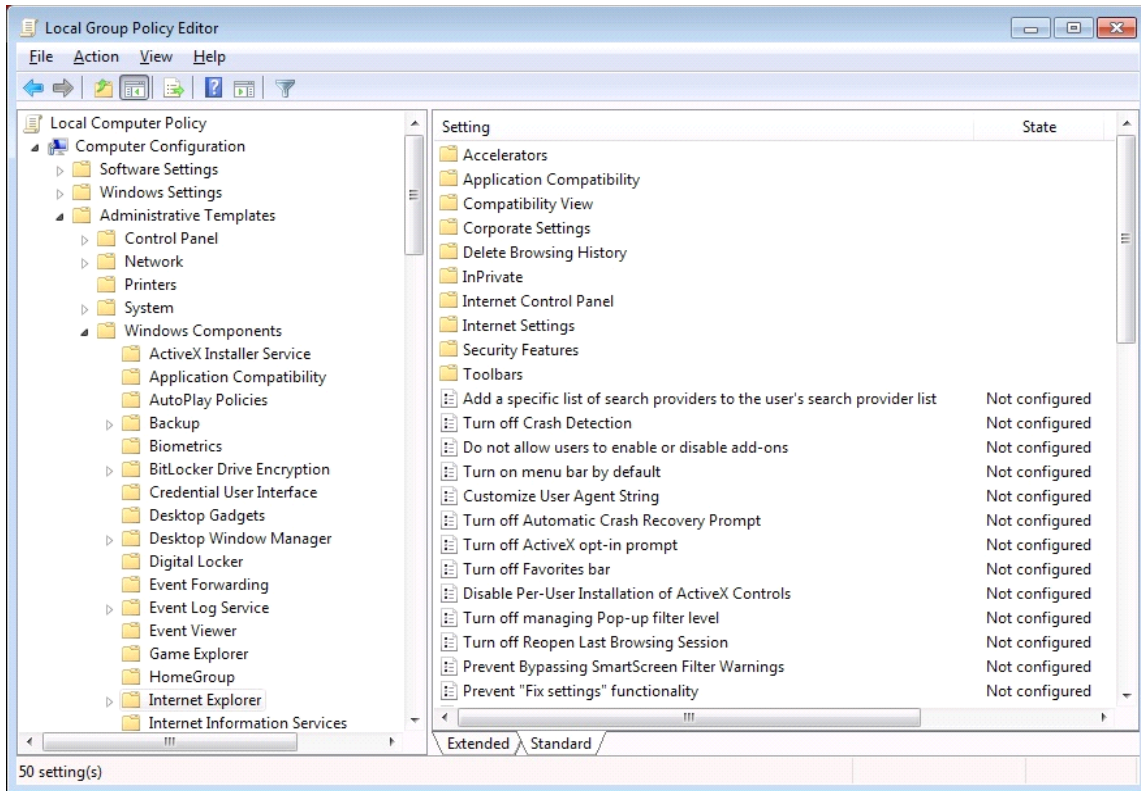


Figure 9: The bulk of the IE8 Group Policy settings are under "Administrative Templates."

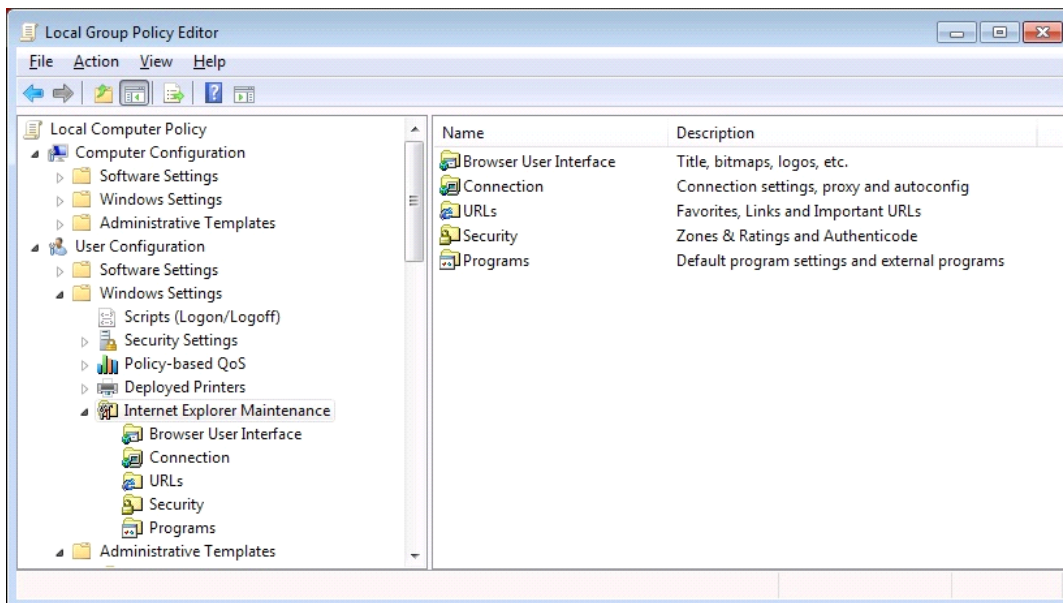


Figure 10: The venerable IEAK settings may be found under the "Windows Settings" node.

10. Tab-Based Extension Isolation

It's been awhile since an IE crash locked up Windows completely. Microsoft has gotten better about isolating IE failures from the underlying operating system since the bad old days of Windows 95 and the crash-prone "Active Desktop." (Software integration isn't always a good thing.)

However, with the introduction of tabbed browsing in IE, a similar problem reared its head: a crashed extension would commonly lock up all tabs in a given IE7 window, making the convenience of having multiple open tabs into a double-edged sword. Personally, I got into the habit of not using tabs at all, and just opening a separate window for each Web page. At least this way, if IE crashed, I only lost one page and not eight!

In IE8, Microsoft has isolated browser extensions on a per-tab basis, so an extension crash in one tab shouldn't affect other tabs. If this works as advertised, it will make me much more inclined to use tabs... and less inclined to advise users to avoid them in order to minimize the inconvenience of extension crashes.

Conclusion

There are, of course, other IE8 features that we haven't touched on in this brief paper. For example, Microsoft has made some performance enhancements for websites using AJAX (Asynchronous JavaScript And XML). And IE8 makes a stronger effort at honoring CSS (Cascading Style Sheet) standards for page layout. There are also new search capabilities built into the IE8 address bar: as you type, IE8 will perform a Windows 7-style real time search of your favorites, history, and RSS feeds. And there are color-coded "tab groups" to help you manage IE when you have lots of tabs open and some of them were opened from particular pages. And there are features that are useful for Web developers, too, which we didn't discuss here. However, the ten topics presented here get my vote for what every Windows 7 administrator should know about the new version of IE that Windows 7 brings to the table. (Or, rather, to the desktop.)

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About the Author

Glenn Weadock is a longtime instructor for Global Knowledge and teaches Windows Server 2008, Active Directory, Vista, and Windows 7 courses, among others. He also consults through his Colorado-based company Independent Software, Inc., blogs for Network World online, and is the author of 18 computer books.