**Microsoft IT Deploys Windows Internet Explorer 9 to over 130,000Client Computers at Microsoft**

IT Showcase On: Windows® Internet Explorer® 9  
Quick Reference Guide

Windows BitLocker Drive Encryption

**EXECUTIVE OVERVIEW**

**Situation:** Microsoft IT (MSIT) deployed pre-release versions of Windows Internet Explorer 9 to the global Microsoft workforce. MSIT prepared for the deployment by creating readiness materials, by creating an effective support and feedback structure, and by testing Line-of-Business (LOB) applications for compatibility issues. The Internet Explorer 9 deployment has been very successful. The incident rate (IR) is very low (0.13% at RTW + 30 days) and the overall pass rate for MSIT LOB applications is 98%.

**Why You Should Care:**

1. A browser is a very important component of a   
   corporate infrastructure. Internet Explorer 9 delivers a best-in-class experience for end users.
2. The testing that MSIT did on 220 critical LOB applications and non-critical applications helped to make Internet Explorer 9 a very solid product.
3. Other companies deploying Internet Explorer 9 can learn from Microsoft IT’s experiences.

**PIllars: Fast, Clean, TrustED, Interoperable**

**Fast**

* As measured by the SunSpider JavaScript Benchmark Test, Internet Explorer 9 is 20 times faster than   
  Internet Explorer 8 and faster than Chrome 10 and Firefox 4 Beta 12.
* Internet Explorer 9 is the first browser to take advantage of hardware-based acceleration (GPU). With hardware-based acceleration, users can unlock the full power of their computers. Pages load faster and developers can add richer and more interactive experiences.

**Clean**

* Internet Explorer 9 has a clean new user interface that puts the emphasis on websites. The browser fades to the background so websites can take center stage.
* The browsing experience is seamless, like a native Windows application. Users can pin sites directly to the task bar, which makes websites feel more like applications. Website owners can add notifications to the pinned icon jump lists, providing users with new experiences. Internet Explorer 9 also dresses to match the colors of the website.
* Notifications are “quieted” and appear at the bottom of the page and don’t obstruct the browsing experience.

**Trusted**

* Internet Explorer 9 builds on SmartScreen® and other enhancements in earlier versions that block socially engineered attacks. An independent security firm (NSS) found that Internet Explorer 9 blocked 99% of socially engineered malware attacks.
* In the last 1.5 years, Internet Explorer has blocked over 1.5 billion pieces of malware and 160,000,000 phishing attempts with the SmartScreen filter (database of phishing/malware links). The Internet Explorer 9 SmartScreen Application Reputation (AppRep) feature improves on the IE8 SmartScreen filter. AppRep only warns users about files that are known to be risky or are not commonly downloaded. If the file has a good reputation, there is no warning prompt. With fewer warning prompts, users learn to take prompts more seriously.
* Internet Explorer 9 also helps enhance privacy. Web sites pull content from many different third-party sites. Although third-party content is useful, some of it is designed to track user activity. Internet Explorer 9 helps protect privacy by blocking third-party content based on a Tracking Protection List that users install.

**Interoperable**

* To show support for the HTML5 standard, Microsoft implemented many of the components defined in the standard and has donated over 6000 test cases to the W3C. This helps Internet Explorer 9 and other browsers stay compliant with the HTML5 standard.

**READINESS**

Microsoft IT prepared for the deployment of Internet Explorer 9 in the following ways:

* **Helpdesk**. MSIT trained Helpdesk technicians on all of the new features before deployment. Technicians also trained on all of the changes that happened between Internet Explorer 8 and 9. MSIT created 10 Knowledgebase (KB) articles before launching the Internet Explorer 9 Beta. MSIT also provided troubleshooting guidance and escalation paths.
* **User Training**. MSIT used its ITWeb intranet site to provide users with information on new features, installation, support, and migration tips. For example, in Internet Explorer 8, Favorites are on the left. In Internet Explorer 9, Favorites are on the right.
* **Employee Communications**. To help build excitement for the product, MSIT promoted Internet Explorer 9 on the Microsoft Web (MSW), Microsoft’s main intranet site. Advertisements included Inside Track stories, productivity-focused articles, and tips and tricks.
* **IT Executive Sponsorships**. To support adoption, MSIT enlisted executives to blog and send email.
* **LOB Applications**. MSIT identified 220 critical applications on the corporate network and tested those applications in six different test passes. The goal was 95% compatibility before deploying to the company. MSIT deployed to a pilot group of 40,000 users for the Beta. After bugs were fixed, MSIT deployed again to 60,000 users for the RC build.

# Deployment

* MSIT used System Center Configuration Manager (SCCM) as the primary deployment method. SCCM covers 75% of the company’s client computers. SCCM can reach about 180,000 out of 240,000 machines in the Workstations OU. Users can also download Internet Explorer 9 from the corporate network.
* SCCM Deployment has three basic steps: 1) Packaging; 2) User acceptance testing; 3) Rollout

The following table shows MSIT’s approach for each step.

|  |  |
| --- | --- |
| **Step** | **MSIT Approach** |
| **Packaging** | Since Internet Explorer 9’s payload installer has all of the detection logic built in, MSIT was able to package and deploy in one day instead of the usual five or six days. |
| **User acceptance testing** | MSIT has certain enterprise scenarios that they validate for all software and especially for Internet Explorer. For example, with Internet Explorer 9 you can set the default behavior for one-word search so that it searches the internal DNS first and takes you to the internal site instead of the Bing® result.  MSIT also tests regular client behavior. For example, will it be an interactive solution process or a silent process? When MSIT upgrades the user to the latest Internet Explorer 9 bits, it’s an interactive process. When MSIT uses the GPO to deploy preference settings, it’s silent. |
| **Rollout** | MSIT took a phased approach. In the first phase (Beta), MSIT piloted to 20% (40,000) of client computers. For the second phase (RC), MSIT targeted 50% (60,000) of client computers. At RTW, MSIT targets 100%. Factors that MSIT takes into account before deploying:   * **Patch Compliance**. The same Microsoft security patches that go out every Tuesday of each month are applied internally in the corporate environment. To ensure a good client experience, MSIT only deploys to patch-compliant computers. * **Time of Year**. MSIT deploys at times that are not disruptive to the business. For example, for mid-year reviews, MSIT excludes the group responsible for managing the reviews. |

# Support

* The MSIT Supportability team analyzes Helpdesk call Service Requests (SRs) and creates KB articles to address those issues. The team created 50 KB articles that technicians can use to resolve users’ problems quickly.
* The Supportability team also creates troubleshooting guides for users and technicians. The team posts these self-service guides on the MSIT intranet site—ITWeb. Other content on ITWeb includes: new features, why Internet Explorer 9 is better than Internet Explorer 8, FAQ mined from Helpdesk data, Known Issues compiled by the product group, and compatibility status of the different LOB applications.
* There is a clear path of escalation from Tier 1, to Tier 2, and then to the product group.

# FEEDBACK channels

* **Built-In Feedback Mechanism**. The product group built a feedback mechanism into the prerelease builds. Users could go to **Tools**, **Options** or press Alt+X to open a feedback window. The Supportability team analyzed and prioritized that feedback and provided it to the product group to build into the product.
* **Top-Issues List**. The Supportability team organized all of the SRs into a top-issues list and made that list available to self-support channels and to the product group.
* **Field IT Managers**. Field IT (regional) managers received feedback and provided that feedback to the Supportability team. The team classified the data and provided it to the product group.
* **ITWeb Intranet Site**.MSIT provided a Feedback Discussion box on the ITWeb “dogfood” page so that users could share their feedback with the product group.
* **Email Distribution Groups**. Many Microsoft users provide feedback through distribution groups. For example, many users were confused about what happened to the Favorites bar. The Supportability team trained the Helpdesk technicians so they would know this was by design, and flagged this change in the training materials posted to ITWeb.
* **Customer Voice—Consensus Survey**. These anonymous surveys measure Net Satisfaction (NSAT). The Supportability team sent out surveys at each milestone during the pre-release (dogfood) phase. The Supportability team provided all survey results to the product group to build into the product.

# INCIDENT RATE

The incident rate (IR) is the user base divided by the number of SRs. The following table shows the average IR for the different milestones.

|  |  |
| --- | --- |
| **Milestone** | **Incident Rate** |
| Beta (starting point) | 2.5% |
| RC | 0.22% |
| RTW + 30 days | 0.13% |

# BEST Practices

* **LOB Applications**. With LOB applications, fear, uncertainty, and doubt are sometimes a larger issue than the incompatibility itself. To unblock migrations and manage costs, identify and prioritize the critical applications to test.
* **Training**. Create a FAQ and post Known Issues as well. Provide a variety of training aids, including tips and tricks that show how to change and modify Internet Explorer to better suit user needs. Make it clear how the product will benefit the user.
* **Companywide Communications**. Create email templates to distinguish critical action items, standard action items, and simple alerts. Prepare users in advance about when the software will be deployed, how to install, and a Web site to go to for more information.
* **Risk Management**. Ensure user experience by deploying only to patch-compliant machines. Also, be wary of time of year so as not to disrupt business during important cycles such as mid-year reviews.

# EDUCATIOn RESOURCES

* Microsoft IT Tests Line of Business Application Compatibility for Internet Explorer 9  
  <http://technet.microsoft.com/en-us/library/gg981681.aspx>
* Experience Internet Explorer 9 Beauty of The Web  
  <http://www.beautyoftheweb.com>
* Internet Explorer 9 Test Drive  
  <http://ie.microsoft.com/testdrive/>
* Internet Explorer 9 for Developers  
  <http://msdn.microsoft.com/en-us/ie/default>