[MS-GPIE]:
Group Policy:
Internet Explorer Maintenance Extension

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Revision Summary

Date	Revision History	Revision Class	Comments
03/02/2007	1.0	Major	Updated and revised the technical content.
04/03/2007	1.1	Minor	Updated the technical content.
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06/01/2007	2.0.1	Editorial	Revised and edited the technical content.
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08/08/2013	16.1	No change	No changes to the meaning, language, or formatting of the technical content.

Contents

1 Introduction

This document specifies the Group Policy: Internet Explorer Maintenance Extension protocol.

Sections 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. Sections 1.5 and 1.9 are also normative but cannot contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are defined in [MS-GLOS]:

> **Active Directory**
> **administrative tool**
> **American National Standards Institute (ANSI) character set**
> **Augmented Backus-Naur Form (ABNF)**
> **client-side extension GUID (CSE GUID)**
> **directory**
> **fully qualified domain name (FQDN) (2)**
> **globally unique identifier (GUID)**
> **Group Policy Object (GPO)**
> **Group Policy Object (GPO) path**
> **Lightweight Directory Access Protocol (LDAP)**
> **policy target**
> **share**
> **system volume (SYSVOL)**
> **tool extension GUID or administrative plug-in GUID**
> **Unicode**
> **Universal Naming Convention (UNC)**

The following terms are specific to this document:

> **client:** Within this document, a "client", also called a client computer, is a computer that receives and applies settings of a **Group Policy Object (GPO)**, as specified in [MS-GPOL].

> **MAY, SHOULD, MUST, SHOULD NOT, MUST NOT:** These terms (in all caps) are used as described in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the documents, which are updated frequently. References to other documents include a publishing year when one is available.

A reference marked "(Archived)" means that the reference document was either retired and is no longer being maintained or was replaced with a new document that provides current implementation details. We archive our documents online [Windows Protocol].

1.2.1   Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[MS-GPOL] Microsoft Corporation, "Group Policy: Core Protocol".

[MS-GPREG] Microsoft Corporation, "Group Policy: Registry Extension Encoding".

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, http://www.rfc-editor.org/rfc/rfc2119.txt

[RFC4234] Crocker, D., Ed., and Overell, P., "Augmented BNF for Syntax Specifications: ABNF", RFC 4234, October 2005, http://www.ietf.org/rfc/rfc4234.txt

1.2.2   Informative References

[MS-FASOD] Microsoft Corporation, "File Access Services Protocols Overview".

[MS-GLOS] Microsoft Corporation, "Windows Protocols Master Glossary".

[MS-WPO] Microsoft Corporation, "Windows Protocols Overview".

[MSDN-BMPST] Microsoft Corporation, "Bitmap Storage", http://msdn.microsoft.com/en-us/library/dd183391(VS.85).aspx

[MSDN-ICO] Microsoft Corporation, "Icons in Win32", http://msdn.microsoft.com/en-us/library/ms997538.aspx

[MSDN-INF] Microsoft Corporation, "About INF Files", http://msdn.microsoft.com/en-us/library/aa376858.aspx

[MSDN-RAS] Microsoft Corporation, "RASENTRY structure", http://msdn.microsoft.com/en-us/library/aa377274.aspx

[MSDN-RAS2] Microsoft Corporation, "RASDIALPARAMS", http://msdn.microsoft.com/en-us/library/aa377238.aspx

[MSDN-SECZONES] Microsoft Corporation, "About URL Security Zones", http://msdn.microsoft.com/en-us/library/ms537183.aspx

[MSDN-WININET1] Microsoft Corporation, "INTERNET_PER_CONN_OPTION_LIST structure", http://msdn.microsoft.com/en-us/library/aa385146.aspx

[MSDN-WININET2] Microsoft Corporation, "INTERNET_PER_CONN_OPTION structure", http://msdn.microsoft.com/en-us/library/aa385145.aspx

[MSFT-IEM] Microsoft Corporation, "Internet Explorer Maintenance Extension Technical Reference", March 2003, http://technet2.microsoft.com/WindowsServer/en/Library/7393c49d-238e-433d-9193-ffe4f64b1e0f1033.mspx

[RFC1001] Network Working Group, "Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Concepts and Methods", STD 19, RFC 1001, March 1987, http://www.ietf.org/rfc/rfc1001.txt

[RFC1035] Mockapetris, P., "Domain Names - Implementation and Specification", STD 13, RFC 1035, November 1987, http://www.ietf.org/rfc/rfc1035.txt

[RFC1123] Braden, R., "Requirements for Internet Hosts - Application and Support", STD 3, RFC 1123, October 1989, http://www.ietf.org/rfc/rfc1123.txt

[RFC2181] Elz, R., and Bush, R., "Clarifications to the DNS Specification", RFC 2181, July 1997, http://www.ietf.org/rfc/rfc2181.txt

[RFC3986] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifier (URI): Generic Syntax", STD 66, RFC 3986, January 2005, http://www.ietf.org/rfc/rfc3986.txt

1.3 Overview

The Group Policy: Internet Explorer Maintenance Extension protocol enables administrators to assign custom Favorites, links, security, interface, and other settings to Internet Explorer as part of a **Group Policy Object (GPO)**. This enables administrators to enforce Internet-related security standards and provide a common browser interface within an organization.

1.3.1 Background

The Group Policy: Core Protocol Specification (as specified in [MS-GPOL]) enables **clients** to discover and retrieve policy settings created by administrators of a domain. These settings are located in Group Policy Objects (GPOs), which are assigned to **policy target** accounts in **Active Directory (AD)**.

On each client, each GPO is interpreted and acted on by software components known as client-side plug-ins. The client-side plug-ins responsible for a given GPO are specified using an attribute on the GPO. This attribute specifies a list of **Globally Unique Identifier (GUID)** pairs. The first GUID of each pair is referred to as a **client-side extension GUID (CSE GUID)**. The second GUID of each pair is referred to as a **tool extension GUID**.

For each GPO that is applicable to a client, the client consults the CSE GUIDs listed in the GPO to determine which client-side plug-ins on the client should handle the GPO. The client then invokes the client-side plug-ins to handle the GPO.

A client-side plug-in uses the contents of the GPO to retrieve settings specific to its class in a manner specific to its class. Once its class-specific settings are retrieved, the client-side plug-in uses those settings to perform class-specific processing.

1.3.2 Internet Explorer Maintenance Extension Protocol Overview

The participants in this protocol are the following:

- An administrative tool plug-in that is used to author and upload configuration settings (both policies and associated data files).

- A server acting as a generic binary large object (BLOB) store with no protocol-specific knowledge.

- A client with a client-side plug-in and a version of Internet Explorer.

The administrator can specify configuration information through a user interface provided by the administrative tool plug-in. The administrative tool plug-in then encodes the configuration information into one or more data files, and then copies the files into the generic BLOB store. The location of these files is stored in a GPO. The **administrative tool** uses the Group Policy: Core Protocol to store this GPO in Active Directory.

The Group Policy: Core Protocol specifies how a client can learn of an updated policy (as specified in [MS-GPOL] section 1.3.3) and, based on identifiers associated with each GPO, invoke an appropriate client-side plug-in. In the case of the Group Policy: Internet Explorer Maintenance Extension protocol, this client-side plug-in then retrieves the files contained in the GPO, copying them from a well-known location in the generic BLOB store ("<gpo path>\user\Microsoft\IEAK") to the client, where they will be processed later by Internet Explorer components.<1>

1.4 Relationship to Other Protocols

The Group Policy: Internet Explorer Maintenance Extension protocol is initiated only as part of the Group Policy: Core Protocol, as specified in [MS-GPOL] section 1.3.3. The Group Policy: Internet Explorer Maintenance Extension protocol is dependent on the Group Policy: Core Protocol to provide it with the remote storage location for the configuration data, as specified in [MS-GPOL] and for transmitting Group Policy settings and instructions between the client and the Group Policy server. The Group Policy: Internet Explorer Maintenance Extension protocol is also indirectly dependent on the **Lightweight Directory Access Protocol (LDAP)** via the Group Policy: Core Protocol.

The Group Policy: Internet Explorer Maintenance Extension protocol uses remote file access to read and write files on the remote storage location. See [MS-WPO] section 6.4 for an overview of remote file access.
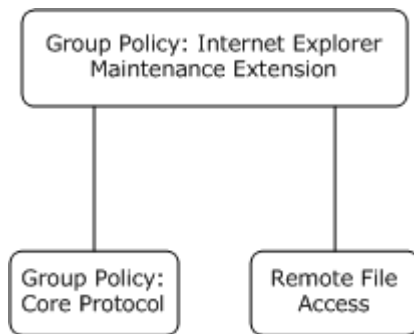
Figure 1: Group Policy: Internet Explorer Maintenance Extension protocol relationship diagram

1.5 Prerequisites/Preconditions

There are no prerequisites or preconditions for the Group Policy: Internet Explorer Maintenance Extension protocol beyond what is specified in Group Policy: Core Protocol.

1.6 Applicability Statement

The Group Policy: Internet Explorer Maintenance Extension protocol is applicable only within the Group Policy framework, as described in [MS-GPOL].

1.7 Versioning and Capability Negotiation

The Group Policy: Internet Explorer Maintenance Extension protocol is not versioned and does not require any capability negotiation. It supports heterogeneous clients running different versions of the operating system or Internet Explorer browser.<2> However, some settings are not applicable for every version, and these are specifically mentioned in this document.

1.8 Vendor-Extensible Fields

The Group Policy: Internet Explorer Maintenance Extension protocol does not define any vendor-extensible fields.

1.9 Standards Assignments

The Group Policy: Internet Explorer Maintenance Extension protocol defines client-side extension GUID (CSE GUID) and tool extension GUID standards assignments, as specified in [MS-GPOL] section 1.8. The assignments are as shown in the following table.

Parameter	Value
CSE GUID for client-side plug-in	{A2E30F80-D7DE-11d2-BBDE-00C04F86AE3B}
Tool extension GUID (user policy settings)	{FC715823-C5FB-11D1-9EEF-00A0C90347FF}

2 Messages

2.1 Transport

All messages are exchanged by copying files, using remote file access as described in [MS-FASOD].

2.2 Message Syntax

2.2.1 SYSVOL Structure

The file store for Group Policy: Internet Explorer Maintenance Extension protocol files MUST be located in **SYSVOL** in the **directory** structure shown in the figure below. Each subdirectory of the "branding" directory is optional, as is each file contained therein; but if the subdirectory is present, it MUST be named and located as depicted in the figure. Additional files may be placed in some of the subdirectories of the "branding" directory. Specifically, a file name followed by ",..." indicates that other files may exist in the directory.

```
Domain Controller

\\Domain_Name\SYSVOL\Domain_name\Policies\{GPOGUID}\user\Microsoft\IEAK
    install.ins
    branding
        adm
            inetcorp.adm
            inetcorp.inf
            inetset.adm
            inetset.inf
        anibmp
            animated bitmap filename, ...
        authcode
            authcode.inf
        btoolbar
            color logo file name, ...
            gray scale logo file name, ...
        cs
            connect.set
            cs.dat
        favs
            favorite icon (favicon) file name, ...
        logo
            small logo file name, ...
            big logo file name, ...
        programs
            programs.inf
        ratings
            ratings.inf
            ratrsop.inf
        toolbmp
            toolbar bmp file name, ...
        zones
            seczones.inf
            seczrsop.inf
```
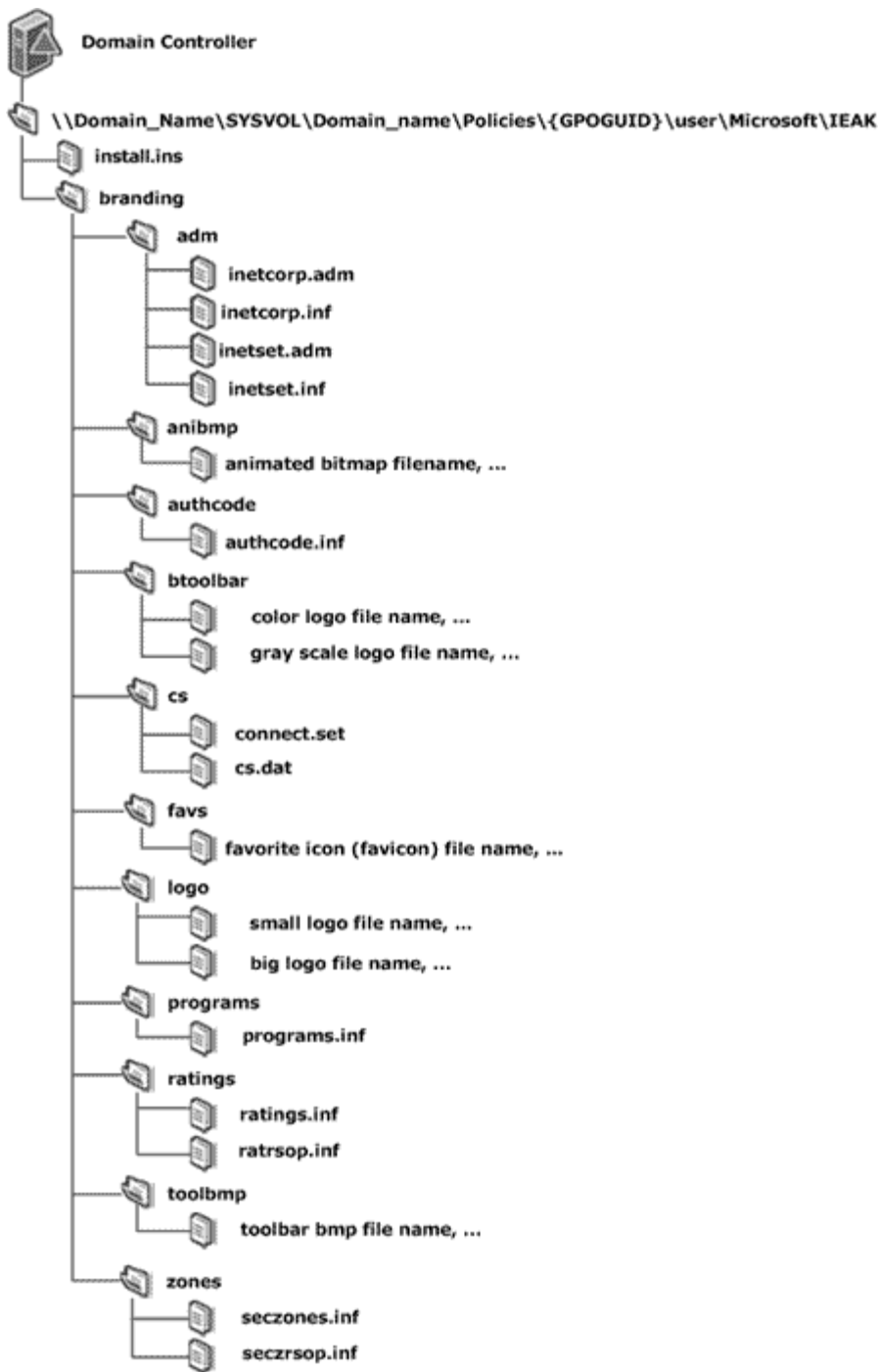
Figure 2: SYSVOL structure for Group Policy: Internet Explorer Maintenance Extension protocol

3   Protocol Details

3.1   Administrative Tool Plug-in Details

The administrative plug-in mediates between a user interface (UI) and a generic BLOB store that contains data files. Its purpose is to receive configuration information from a UI and to write data files to a generic BLOB store.

3.1.1   Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

The administrative plug-in relies on a collection of data files described in section 2.2 and stored in the generic BLOB store. The administrative plug-in reads in these data files from the BLOB store and displays them to an administrator through a UI.

An administrator can then use the UI to make further configuration changes and the administrative plug-in will copy the resultant data files to the BLOB store.

This conceptual data can be implemented using a variety of techniques. An implementation can implement such data using any method.

3.1.1.1   Administered GPO (Public)

The Administered GPO is generated by [MS-GPOL] (as specified in section 3.3.1.3) and is read by Group Policy: Internet Explorer Maintenance Extension. The **Group Policy Object (GPO) path** is used to determine the destination of the data files being copied to a BLOB store.

3.1.2   Timers

None.

3.1.3   Initialization

When the administrative tool plug-in is initialized, it retrieves the extension's GPO settings as described in [MS-GPOL] section 2.2.7, and uses remote file access to read the contents of the various configuration files which are located under SYSVOL as described in section 2.2.

3.1.4   Higher-Layer Triggered Events

Whenever an administrator changes a setting, the administrative tool plug-in MUST write the configuration files to the file **share** using remote file access. The install.ins file MUST reside under "<gpo path>\user\Microsoft\IEAK\". The remaining configuration files MUST reside under the "<gpo path>\user\Microsoft\IEAK\branding" directory, as specified in section 2.2.

3.1.5   Message Processing Events and Sequencing Rules

The administrative tool plug-in MUST write all the files to SYSVOL, as specified in [MS-GPOL], using remote file access. If a copy fails, the administrative tool plug-in MUST display to the user that the policy update has failed. After every creation, modification, or deletion that affects a GPIE file on

SYSVOL, the administrative tool MUST invoke the Group Policy Extension Update task ([MS-GPOL] section 3.3.4.4, Group Policy Extension Update).

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

3.2 Client-Side Plug-in Details

The client-side plug-in for the Group Policy: Internet Explorer Maintenance Extension protocol retrieves settings, and controls how Internet Explorer behaves on client computers that receive settings. All relevant files MUST first be copied from the file store to the client machine.

3.2.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

3.2.1.1 Client-Side State

The client-side plug-in maintains no persistent state. During processing, the New or Changed GPO list passed as a parameter is enumerated and then discarded (see section 3.2.5).

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Higher-Layer Triggered Events

3.2.4.1 Process Group Policy

This extension is launched by the Group Policy: Core Protocol, which invokes the Process Group Policy event, whose abstract interface is specified in [MS-GPOL] section 3.2.4.1, to apply policies that are handled by this extension.

3.2.5 Message Processing Events and Sequencing Rules

For each GPO in the New or Changed GPO list, the client-side plug-in MUST copy, using remote file access, the install.ins file from "<gpo path>\user\Microsoft\IEAK\". If the file is not found, the processing of the current GPO path MUST be skipped.

The client-side plug-in MUST then copy, using remote file access, the "<gpo path>\user\Microsoft\IEAK\branding" directory, including all subdirectories and any files contained in those subdirectories.

The SecurityToken passed by the Group Policy: Core Protocol SHOULD be used to impersonate the logged-on user while copying these files as specified in [MS-DTYP] section 2.7, Impersonation Abstract Interfaces.<3>

The destination of these file copies is implementation-specific.<4>

3.2.6   Timer Events

None.

3.2.7   Other Local Events

None.

4   Protocol Examples

The following sections give examples of the types of files stored on the BLOB server by the authoring components in Windows and ultimately consumed by Internet Explorer. Examples of informative descriptions of the individual file formats for each of the files under the "<gpo path>\user\Microsoft\IEAK" folder in SYSVOL are first, followed by examples of the INSTALL.INS, SECZONES.INF, SECZRSOP.INF, and RATRSOP.INF files.

4.1   File Formats

This section specifies the individual file formats for each of the files under the "<gpo path>\user\Microsoft\IEAK" folder in SYSVOL.

4.1.1   INS File Format

The install.ins file must be a file divided into various formatted sections and written using the **ANSI character set (ANSI)**. Each section is designed for a particular purpose, and the entries in a section are name-value pairs separated by a newline character. The name and value are separated by an equal (=) sign. The **Augmented Backus-Naur Form (ABNF)** definition (as specified in [RFC4234]) for the install.ins file format is as follows:

```
InsFile = *Section
Section = SectionLine *ValueLine
SectionLine = "[" SectionName "]" LineBreak
SectionName = (ALPHA / %d95) *(ALPHA / DIGIT / %d95)
ValueLine = ValueName "=" Value LineBreak
ValueName = (ALPHA / %d95) *(ALPHA / DIGIT / %d95)
Value = String/DquotedString
String = 1*%d33-126
DQuotedString = %d34 1*(%d32-33/%d35-126) %d34
LineBreak = %d13.10
```

The remainder of this section specifies additional restrictions for the SectionName, ValueName, and Value strings, and their interrelationships (for example, a certain ValueName will be legal only after a certain SectionName has appeared). In specifying legal data for Values, the following types are used in this section:

Filename: Indicates that the value is a file name, represented as an ANSI string.

File path: Indicates that the value is the full path name of a file, represented as an ANSI string. It is allowed to be either a local path to a file on the same machine or a **UNC** path to a file on another machine.

Boolean: Indicates that the value must be either 0 or 1 as an ANSI string.

String: Indicates that the value must be an ANSI string that does not contain a newline.

URL: Indicates that the value must be a URL (for more information, see [RFC3986]).

Numeric: Indicates that the value must be an integer between 0 and 2^32-1 expressed in decimal as an ANSI string.

Hexadecimal: Indicates that the value must be an integer between 0 and 2^32-1 expressed in hexadecimal as an ANSI string.

Hostname: Indicates that the value must be the name of another computer. It is allowed to be either a **fully qualified domain name (FQDN)** (for more information, see [RFC1035] section 3.1 or [RFC2181] section 11) or a NetBIOS (for more information, see [RFC1001]) name.

IP Address: Indicates that the value is an IPv4 address as an ANSI string (for more information, see [RFC1123] section 2.1).

The following table specifies sections, corresponding names, and data types for the assigned values for the install.ins file. The description and sample value columns are for informative purposes only (not normative purposes). That is, the values of these settings must not be interpreted by the Group Policy: Internet Explorer Maintenance Extension protocol. These values are merely applied as-is to Internet Explorer, which can interpret them in a way that is independent of what protocol or mechanism was used to configure them.<5>

SectionName	ValueName	Value type	Sample value	Description
[Animation]	Big_Name	Filename	38ani.bmp	The name of a file containing a large animation to be used by Internet Explorer. This must be equal to the last component of the Big_Path entry.
	Big_Path	File path	C:\My Documents\Branding\38ani.bmp	The full path (local or remote) of a file containing an animation to be used by Internet Explorer. The file name component must be equal to the value of the Big_Name entry.
	DoAnimation	Boolean	1	Indicates whether or not Internet Explorer is to customize the animation.
	Small_Name	Filename	22ani.bmp	File name of bitmap file

SectionName	ValueName	Value type	Sample value	Description
		me		that contains the frames for the 22x22 animation.
	Small_Path	File path	C:\My Documents\Branding\22ani.bmp	Full path to the 22x22 icon animation bitmap file.
[ActiveSetup]	WizardBitmap	File path	C:\My Documents\Branding\wizard.bmp	Full path of a bitmap file that can be displayed by the Internet Explorer Setup Wizard.
	WizardBitmapTop	File path	C:\My Documents\Branding\wizardtop.bmp	Full path of a bitmap file that can be displayed by the Internet Explorer Setup Wizard.
	WizardTitle	String	Custom Browser Setup	Text to appear in the Internet Explorer Setup Wizard title bar.
[ActiveSetupSites]	SiteName0	String	Microsoft Download Page	Friendly name of the download site to be used by Internet Explorer.
	SiteRegion0	String	Northwest Region	Friendly name of the geographical region in which the download site is located.
	SiteURL0	URL	http://www.microsoft.com/ie5/download/northwest	URL of the download site.
[Big_Logo]	Name	Filename	static38x38.bmp	Name of the bitmap file

SectionName	ValueName	Value type	Sample value	Description
				containing an icon that can be displayed by Internet Explorer.
	Path	File Path	C:\My Documents\Branding\static38x38.bmp	Full path to the bitmap file containing the icon. The file name component must be equal to the value of the Name entry above.
[Branding]	CabsURLPath	File path	http://example	URL path of cabinet files
	CMBitmapName	Filename		Connection manager custom bitmap file name to be used by Internet Explorer.
	CMBitmapPath	File path		Full path to connection manager custom bitmap file.
	CMProfileName	Filename		Name of connection manager profile to be used by Internet Explorer.
	CMProfilePath	File path		Full path to connection manager profile. The file name component must be equal to the value of the CMProfileName entry

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SectionName	ValueName	Value type	Sample value	Description
				above.
	CMUseCustom	Boolean	0	Indicates whether or not a custom connection manager profile is to be used by Internet Explorer.
	CompanyName	String	Custom Company Name	Name of company to be used by Internet Explorer.
	CompatibilityModeOn	Boolean	1	A value of 1 indicates that Internet Explorer is to enable Compatibility Mode for all sites.
	Custom_Key	String	MICROSO	A value of "MICROSO" will cause any custom branding to be removed from Internet Explorer.
	DisableSuggestedSites	Boolean	1	A value of 1 indicates that Internet Explorer is to disable the Suggested Sites feature.
	EncodeFavs	Boolean	0	A value of 1 indicates that Internet Explorer is to interpret Favorites settings as Internet Explorer 5 did.
	FavoritesDelete	Numeric	0x89	Set this value to 0x89 to

SectionName	ValueName	Value type	Sample value	Description
				tell Internet Explorer to remove all pre-existing Favorites.
	FavoritesOnTop	Boolean	1	A value of 1 indicates that new Favorites are to be added at the top of the Favorites menu. A value of 0 indicates that new Favorites are to be added at the bottom.
	IE4 Welcome Msg	Boolean	1	Indicates to go to a welcome page the first time that the browser is opened.
	InsVersion	String	2010.03.28.02	Version of the INS file.
	Language ID	Numeric	1033	Code page of the language used by Internet Explorer.
	Language Locale	String	EN	Friendly name for locale of the version of Internet Explorer being customized.
	NoDial	Boolean	0	A value of 1 indicates that Internet Explorer is not to use any kind of an IEAK-based sign-up process. A

SectionName	ValueName	Value type	Sample value	Description
				value of 0 indicates that it should.
	NoFavoriteBar	Boolean	1	A value of 1 indicates that Internet Explorer is not to populate the Favorites Bar with default content.
	NoIELite	Boolean	0	A value of 1 if the user wants the Internet Explorer Active Setup Wizard to optimize for download, using existing files if possible.
	NoRSSFeeds	Boolean	1	A value of 1 indicates that Internet Explorer is not to install default RSS feeds.
	NoSearchGuide	Boolean	1	A value of 1 indicates that Internet Explorer is not to offer a link to more search providers.
	Platform	Numeric	6	Indicates the platform and architecture being targeted by this package: 32-bit Windows XP = 1, 32-bit Windows Server 2003 = 2, 64-bit Windows

SectionName	ValueName	Value type	Sample value	Description
				Server 2003 = 4, 32-bit Windows Vista = 3, 64-bit Windows Vista = 5, 32-bit Windows 7 = 6, 64-bit Windows 7 = 7.
	RestartOption	Numeric	1	A value of 1 indicates that the custom package is to invoke Internet Explorer setup with the "/norestart" argument; a value of 2, with the "/forcerestart" argument.
	SilentInstall	Boolean	1	A value of 1 indicates that the custom package is to invoke Internet Explorer setup with the "/passive" argument
	StealthInstall	Boolean	1	A value of 1 indicates that the custom package is to invoke Internet Explorer setup with the "/quiet" argument.
	Toolbar Bitmap	File path		The full path of the bitmap that is to appear on the Internet

SectionName	ValueName	Value type	Sample value	Description
				Explorer toolbar.
	Type	Numeric	2	The type of customization being used by Internet Explorer: 2 = Corporate Administrator, 1 = Internet Service Provider, 0 = Internet Content Provider.
	User Agent	String	Acme v1.1	String to be appended to default User Agent string used by Internet Explorer.
	Version	String	5,0,0,1	Target version of Internet Explorer.
	Win32DownloadSite	URL	0	URL from which the Internet Explorer Setup file will be downloaded.
	Window_Title	String	Microsoft Internet Explorer provided by Custom Company	Customized window title for Internet Explorer.
	Window_Title_CN	String	Custom Company Name	The name to be appended to the Internet Explorer window title.
	Wizard_Version	String	8.0.0.1234	Indicates the version of the IEAK wizard that produced the INS file.

SectionName	ValueName	Value type	Sample value	Description
	GPVersion	String	6.0.6001.16474	Version of the software (IEM Tool Extension) that created the INS file.
[BrowserToolbars]	Action0	File path	c:\windows\notepad.exe	The full path of a command to be executed for a custom toolbar button in Internet Explorer.
	Caption0	String	Sample	A caption for the custom toolbar button in Internet Explorer.
	DeleteButtons	Boolean	1	Indicates whether or not to delete existing custom Internet Explorer toolbar buttons on install.
	HotIcon0	File path	C:\My Documents\Branding\Icons\hoticon.ico	The highlighted icon to appear in the button when the pointer is over the button in Internet Explorer.
	Icon0	File path	C:\My Documents\Branding\Icons\icon.ico	The gray icon to appear in the button when the pointer is not over the button in Internet Explorer.

SectionName	ValueName	Value type	Sample value	Description
	Show0	Boolean	1	Displays the new toolbar button on the toolbar by default.
	ToolTipText0	String	Click the sample button.	ToolTip text for the custom button.
[CabSigning]	InfoURL	URL	http://www.contoso.com/moreinfo.htm	The URL to appear on the certificate dialog in Internet Explorer.
	Name	String	Microsoft	The company name that is associated with the certificate.
	pvkFile	File path	c:\key.pvk	The full path of a private key file to be used by Internet Explorer.
	spcFile	File path	c:\cert.spc	The full path of the actual certificate file.
[CDCustomFiles]	InstallIEVersion	String	7,0,0,0	Specifies the latest version of Internet Explorer to which this CD-based install will apply.
[Channel Add]	Category	Boolean	0	A value of 1 indicates that there will be only one Internet Explorer channel category; for multiple channel categories, set this value

SectionName	ValueName	Value type	Sample value	Description
				to 0.
	CDFUrl0	URL	http://server/sample.cdf	URL of the channel's .cdf file to be used by Internet Explorer.
	ChBmpPath0	File Path	sample.bmp	The full path of a bitmap for the channel, to appear in the Channel bar.
	ChIconPath0	File Path	sample.ico	The full path of an icon for the channel.
	ChPreloadUrlName0	Filename	sample.cdf	The name of .cdf file.
	ChPreloadUrlPath0	File Path	C:\WINDOWS\WEB\sample.cdf	Full path to .cdf file. The file name component must be equal to the value of the ChPreloadUrlName0 entry above.
	ChTitle0	String	Sample Custom Channel	Title for the channel.
	No Channels	Boolean	1	No channels indicates that no channels will be added.
[ConnectionSettings]	ConnectName0	String	Microsoft	Name for connection to be used by Internet Explorer.
	DeleteConnectionSettings	Boolean	0	Set this to 1 to remove the existing Internet Explorer connection settings.

SectionName	ValueName	Value type	Sample value	Description
	EnableAutodial	Boolean	0	A value of 1 indicates that Internet Explorer is to always dial the default connection.
	NoNetAutodial	Boolean	0	A value of 1 indicates that Internet Explorer is to dial whenever a network connection is not present.
	Option	Boolean	0	A value of 1 indicates that the IEAK is to import the current connection settings and install them on target machines.
[Custom Branding]	Branding	URL	http://www.cohowinery.com/cabs/branding. cab,1998.09.26.03,-1,0	URL to branding cab to be used by Internet Explorer.
[Custom Wallpaper]	File0	Filename	wallpaper.htm	The name of an HTML file for custom wallpaper to be used by Internet Explorer.
	File1	Filename	wallpaper.gif	The name of a file referenced in the HTML above.
	NumFiles	Numeric	2	Total number of files for custom wallpaper.
[DesktopObjects]	Channel Bar	Boolean	1	Displays the Channel bar on Internet

SectionName	ValueName	Value type	Sample value	Description
				Explorer startup.
	Delete Old Channels	Boolean	1	Indicates to delete existing channels.
	Desktop Component URL	URL	http://	URL to the desktop component being added.
	Desktop Wallpaper Path	File path	C:\My Documents\Branding\wallpapr.bmp	Path to the desktop wallpaper to be used by Internet Explorer.
	Option	Boolean	1	Set this to 1 if using any desktop customizations.
[Device]	Type	String	modem	The type of connection being used for setup.
[ExtRegInf]	chat	String	*,chat.inf,DefaultInstall	INF file and install mode for Internet Explorer components.
[FavoritesEx]	IconFile1	File Path	c:\windows\temp\iedktemp\branding\favs\news.ico	Icon for Favorite to be used by Internet Explorer.
	Offline1	Boolean	1	Indicates if Internet Explorer is to make the Favorite available for offline browsing.
	Title1	String	fav name.url	Title of the Favorite.
	Url1	URL	http://fav url	URL of the Favorite.

SectionName	ValueName	Value type	Sample value	Description
[Favorites]	fav name.url	URL	http://fav url	The ValueName in this setting is the Internet Explorer Favorite name, and the value is the Internet Explorer Favorite URL.
[HideCustom]	GUID	Boolean	0	The ValueName in this setting is the GUID for the component. A value of 1 indicates that it is to be hidden on the Internet Explorer custom screen, and 0 if not.
[ICW_IEAK]	Header_Bitmap	File path	C:\My Documents\Branding\ICW_Header	The file path of a custom header bitmap for the Internet Explorer Internet Connection Wizard.
	Watermark_Bitmap	File path	C:\My Documents\Branding\ICW_Watermark	The file path of a custom watermark bitmap for the Internet Explorer Internet Connection Wizard.
[IEAKLite]	Certificate Customization	Boolean	1	A value of 1 indicates that the IEAK wizard is to show the "Certificate Customizatio

SectionName	ValueName	Value type	Sample value	Description
				n" page.
	Sign-up Settings	Boole an	1	A value of 1 indicates that the IEAK wizard is to show the "Sign-up Settings" page.
[Media]	Build_BrandingO nly	Boole an	1	A value of 1 indicates that the IEAK will build a branding-only package.
	Build_CD	Boole an	0	A value of 1 indicates that the IEAK will build a CD package.
	Build_LAN	Boole an	0	A value of 1 indicates that the IEAK will build a LAN package.
[Proxy]	FTP_Proxy_Serve r	String	proxy	Host name for proxy server to be used by Internet Explorer.
	Gopher_Proxy_S erver	String	proxy	Host name for proxy server.
	HTTP_Proxy_Ser ver	String	proxy	Host name for proxy server.
	Proxy_Enable	Boole an	0	If set, indicates to use a proxy server.
	Proxy_Override	String	<local>	Host name for proxy server.
	Secure_Proxy_Se rver	String	proxy	Host name for proxy

SectionName	ValueName	Value type	Sample value	Description
				server.
	Socks_Proxy_Server	String	proxy	Host name for proxy server.
	Use_Same_Proxy	Boolean	1	Use one proxy server for all services.
[Scripting]	Name	Filename	dialup.scp	File name of dial-up networking script used by Internet Explorer.
	Name16	Filename	dialup.scp	File name of dial-up networking script (16 bit).
	Name32	Filename	dialup.scp	File name of dial-up networking script (32 bit).
	Path16	File path	c:\scripts\dialup.scp	Full path to 16-bit script.
	Path32	File path	c:\scripts\dialup.scp	Full path to 32-bit script.
[Script_File]	1	String	First line of script file	Actual text of the script file to be used by Internet Explorer.
[Security Imports]	ImportAuthCode	Boolean	0	If set, Internet Explorer is to import the existing Authenticode settings.
	ImportRatings	Boolean	0	If set, Internet Explorer is to import the existing Content Ratings

SectionName	ValueName	Value type	Sample value	Description
				settings.
	ImportSecZones	Boolean	0	If set, Internet Explorer is to import the existing Security Zones settings.
	ImportSiteCert	Boolean	0	If set, Internet Explorer is to import existing site certificate authorities.
	TrustedPublisherLock	Boolean	1	A value of 1 indicates that Internet Explorer is to enable Trusted Publisher Lockdown, which prevents users from adding new trusted publishers.
	Win16SiteCerts	Boolean	0	Use site certificates for 16-bit Windows systems.
[Server]	Disable_LCP	String	yes / no	Default settings for Internet connection to be used by Internet Explorer.
	Negotiate_IPX/SPX	String	yes / no	Internet Explorer is to use IPX protocol.
	Negotiate_NetBEUI	String	yes / no	Use NetBEUI protocol.
	Negotiate_TCP/IP	String	yes / no	Use TCP/IP

SectionName	ValueName	Value type	Sample value	Description
				protocol.
	Network_Logon	String	yes / no	Internet Explorer is to log on to the network.
	PW_Encrypt	String	yes / no	Internet Explorer is to use encrypted passwords.
	SW_Compress	String	yes / no	Internet Explorer is to use software compression.
	SW_Encrypt	String	yes / no	Require data encryption.
	Type	String	ppp	Server type, such as ppp.
[Signature]	Signature_Text	String	This is fun\n	Text of signature.
	Use_Signature	Boolean	1	If set, indicates to use the signature in the Signature_Text entry above.
[SignupFiles]	file0	Filename	cancel.ins	File name of signup INS to be used by Internet Explorer.
[Small_Logo]	Name	Filename	static22x22.bmp	Name of 22x22 pixel bitmap file for icon to appear in upper right corner of Internet Explorer.
	Path	File path	C:\My Documents\Branding\static22x22.bmp	Full path to the small logo bitmap file. The file name

SectionName	ValueName	Value type	Sample value	Description
				component must be equal to the value of the Name entry above.
[TCP/IP]	DNS_Address	IP Address	127.0.0.1	IP number of DNS server that Internet Explorer is to use.
	DNS_Alt_Address	IP Address	127.0.0.1	IP number of alternate that DNS server to use.
	Gateway_On_Remote	String	yes / no	Use remote gateway.
	IP_Header_Compress	String	yes / no	Use IP header compression.
	Specify_IP_Address	String	yes / no	Specify an IP address to use.
	Specify_Server_Address	String	yes / no	Specify a server address to use.
[URL]	AutoConfig	Boolean	1	Set this to 1 to tell Internet Explorer to use an auto-configured proxy.
	AutoConfigJSURL	URL	http://auto proxy url	URL of JS format auto-proxy file used by Internet Explorer.
	AutoConfigTime	Numeric	99	AutoConfig after this many minutes.
	AutoConfigURL	URL	http://auto config url	The URL of auto-proxy file used by

SectionName	ValueName	Value type	Sample value	Description
				Internet Explorer.
	AutoDetect	Boolean	1	A value of 1 indicates that Internet Explorer is to automatically detect configuration settings.
	FirstHomePage	URL	http://custom welcome page	Page to browse to on first run of customized browser.
	Help_Page	URL	http://online support	URL of the Help page to be used by Internet Explorer.
	Home_Page	URL	http://homepage	URL for the default home page to be used by Internet Explorer.
	NoWelcome	Boolean	1	Do not display a welcome page the first time that Internet Explorer is used.
	Quick_Link_1	URL	http://www.microsoft.com/isapi/redir.dll?prd	Quick link URL.
	Quick_Link_1_Name	String	Best of the Web.url	Quick link name.
	Quick_Link_2	URL	http://www.microsoft.com/isapi/redir.dll?prd	Quick link URL.
	Quick_Link_2_Name	String	Channel Guide.url	Quick Link name.
	Quick_Link_X	URL	http://link url	Quick link URL.
	Quick_Link_X_Icon	File path	c:\windows\temp\iedktemp\branding\favs\news.ico	Quick link icon.

SectionName	ValueName	Value type	Sample value	Description
	Quick_Link_X_Name	String	News	Quick link name.
	Quick_Link_X_Offline	Boolean	1	If set, Internet Explorer is to make the quick link available for offline browsing.
	Search_Page	URL	http://searchpane	Default search page to be used by Internet Explorer.
	Signup	File path	signup.htm	Path to page with link to INS file for signup server.
	UseLocalIns	Boolean	0	If set, Internet Explorer is to use a local INS file.

4.1.2 ADM File Format

This file format applies to Inetcorp.adm and Inetset.adm under SYSVOL. This file format MUST be as specified in [MS-GPREG] section 2.2.2.1.

4.1.3 INF File Format

This file format applies to all INF files under SYSVOL. This file format is specified by the following ABNF format. For examples of uses of INF files, see [MSDN-INF].

For informative references for the description of Internet security-related fields used in the tables in the following sections, see [MSDN-SECZONES].

```
InfFile = *Section
Section = SectionLine *ValueLine
SectionLine = "[" SectionName "]" LineBreak
SectionName = (ALPHA/%d95) *(ALPHA/DIGIT/%d95)
ValueLine = *(ValueName "=") Values LineBreak
Values = [Value] *("," [Value])
ValueName = (ALPHA/DIGIT/%d95) *(ALPHA/DIGIT/%d95/%d44)
Value = String/DquotedString
String = 1*%d33-126
DQuotedString = %d34 1*(%d32-33/%d35-126) %d34
LineBreak = %d13.10
```

For more information about INF files, see [MSDN-INF].

4.1.3.1 File Format used by Seczones.INF, Authcode.INF, Ratings.INF, and Programs.INF

An informative description of the specific relevant setting names and legal values for these file formats follows, using the definitions of Value type from section 4.1.1. An example of this file format is given in section 4.3.

This description has been broken up into two logical parts: Part A and Part B. This division was made for the clarity of this documentation. In the protocol implementation, there is no separation marker or symbol placed between these parts. Part B seamlessly follows Part A of the file.

4.1.3.1.1 Part A

Part A of seczones.inf is formed by sections and name-value pairs, similar in syntax to the INSTALL.INS file described above in section 4.1.1. The remainder of this section specifies additional restrictions for the SectionName, ValueName, and Value strings, and their interrelationships (for example, a certain ValueName will be legal only after a certain SectionName has appeared). In specifying legal data for Values, the same types are used as in section 4.1.1.

SectionName	ValueName	Value type	Sample value	Description
Version				
	Signature	String	$Chicago$	Signature of an INF file
	AdvancedINF	Numeric.Numeric	2.5	Version of the INF file format
DefaultInstall				
	RequiredEngine	String ',' String	SetupAPI,"Fatal error"	First string is the name of the library (DLL) which is loaded for setup functions, while the second string is the error string which is logged, in case the specified

SectionName	ValueName	Value type	Sample value	Description
				library could not be loaded.
	CustomDestination	String	CustInstDestSection	This must be exactly as shown.
	AddReg	Comma separated list of Strings.	AddReg.HKLM,AddReg.HKCU	Each of the Strings in this list refer to a section name in Part B (section 4.1.3.1.2).
CustInstDestSection				
	49000,49001,49002,49003	String,Numeric	ProgramFilesDir,21	A reference to a section name in the part B of this file followed by an integer.
	49100,49101,49102,49103	String,Numeric	IEDir,21	A reference to a section name in the Part B of this file followed by an integer.

4.1.3.1.2 Part B

This part (Part B) details the sections that must be already named in the previous part (Part A). For each section, the section heading is followed by a set of entries describing a registry key or value. Each entry is a comma-separated list of values terminated by a newline. Each such entry is of the following form:

```
RegistryRoot, [subkey], [value-entry-name], [flags], [value]
```

RegistryRoot

The RegistryRoot must be non-null, while subsequent entries are optional. The comma separators are not optional, so the absence of one of these is indicated by two commas ",,". The RegistryRoot must be one of the following entries:

Short name	Long name
HKCR	HKEY_CLASSES_ROOT
HKCU	HKEY_CURRENT_USER
HKLM	HKEY_LOCAL_MACHINE

subkey

Optional. Identifies the subkey to set. Has the following form: key1\key2\key3....

value-entry-name

Optional. This value either names an existing value entry in the given (existing) subkey or creates the name of a new value entry to be added in the specified subkey, whether the value-entry-name already exists or is a new key to be added to the registry. (If this is omitted for a string-type value, the value-entry-name is the default "unnamed" value entry for this key.)

flags

This optional hexadecimal value, expressed as an OR'd bitmask of system-defined low-word and high-word flag values, defines the data type for a value entry and/or controls the add-registry operation. Bitmask values for each of these flags are as follows:

```
0x00000001 (FLG_ADDREG_BINVALUETYPE)
     The given value is "raw" data. (This value is identical to the
         FLG_ADDREG_TYPE_BINARY.)

0x00000002 (FLG_ADDREG_NOCLOBBER)
     Prevent a given value from replacing the value of an existing
         value entry.

0x00000004 (FLG_ADDREG_DELVAL)
     Delete the given subkey from the registry, or delete the
         specified value-entry-name from the specified registry
         subkey.

0x00000000 (FLG_ADDREG_TYPE_SZ)
     The given value entry and/or value is of type REG_SZ. Note that
         this is the default type for a specified value entry, so
         the flags value can be omitted from any reg-root= line in
         an add-registry section that operates on a value entry of
         this type.

0x00010000 (FLG_ADDREG_TYPE_MULTI_SZ)
     The given value entry and/or value is of the registry type
         REG_MULTI_SZ. This specification does not require any NULL
         terminator for a given string value.

0x00020000 (FLG_ADDREG_TYPE_EXPAND_SZ)
     The given value entry and/or value is of the registry type
         REG_EXPAND_SZ.
```

```
0x00010001 (FLG_ADDREG_TYPE_DWORD)
      The given value entry and/or value is of the registry type
          REG_DWORD.
```

value

Optional. Value to set. Can be a 32-bit number in little-endian format, an ANSI string, or an octet stream. An octet stream can extend beyond the 128-byte line maximum by using a backslash (\) character.

4.1.3.2 Seczrsop.INF File Format

An informative description of the specific relevant setting names and legal values for Seczrsop.inf follows, which uses the definitions of value type from section 4.1.1. An example of this file format is provided in section 4.4. Note that the values of these settings must not be interpreted by the Group Policy: Internet Explorer Maintenance Extension protocol; they are merely applied as-is to Internet Explorer, which can interpret them in a way that is independent of the protocol or mechanism that is used to configure them.

The following table sections repeat per zone for the total count of zones. For example, for a count of 2 zones, the following sections would be Zone0_ HKCU, Zone0_ HKLM, Zone1_ HKCU, and Zone1_ HKLM.

SectionName	ValueName	Value type	Sample value	Description
Security Imports	IEESCEnabled	Boolean	1	Indicates the state of the enhanced security level of the following zone security settings.
	Zones	Numeric	2	The count of Internet security zones listed in the file.

SectionName	ValueName	Value type	Sample value	Description
Zone%d _ HKCU	DisplayName	String	Local intranet	The friendly name of the zone.
	Description	String	This zone is for all websites that are found on the user's intranet.	A longer, friendly description of the zone.
	Icon	String	explorer.exe#100	The string is composed of <binary>#<resource id> pointing to the icon for the zone.
	CurrentLevel	Numeric	66816	An integer denoting the default security level for URL actions in

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SectionName	ValueName	Value type	Sample value	Description
				this zone. For more information, see [MSDN-SECZONES].
	Flags	Numeric	323	An integer conveying additional behavioral parameters for this zone. For more information, see [MSDN-SECZONES].
	Action%d	Hexadecimal: Numeric	1201:1	The string <UrlAction>:<level>. Conveys a new security level for this URL action in this zone.
	MinLevel	Numeric	3	An integer denoting the minimum security level for all URL actions in this zone.
	RecommendedLevel	Numeric	3	An integer denoting the recommended security level for this zone.
	Mapping%d	URL		A URL that maps to this zone.
Zone%d _ HKLM	DisplayName	String	Trusted sites	The friendly name of the zone.
	Description	String	This zone contains websites that the user trusts not to damage the user's computer and files.	A longer, friendly description of the zone.
	Icon	String	explorer.exe#100	The string is composed of <binary>#<resource id> pointing to the icon for the zone.
	CurrentLevel	Numeric	69632	An integer denoting the default security level for URL actions in this zone.
	Flags	Numeric	71	An integer conveying additional behavioral parameters for this zone.

SectionName	ValueName	Value type	Sample value	Description
	Action%d	Hexadecimal: Numeric	1201:1	The string <UrlAction>:<level> conveys a new security level for this URL action in this zone.
	MinLevel	Numeric	3	An integer denoting the minimum security level for all URL actions in this zone.
	RecommendedLevel	Numeric	3	An integer denoting the recommended security level for this zone.
	Mapping%d	URL		A URL that maps to this zone.
PRIVACY				
	AdvancedSettings	Numeric	2	An integer conveying an Internet Explorer privacy level.
	FirstPartyType	Numeric	3	An integer conveying an Internet Explorer privacy level for first-party cookies.
	FirstPartyTypeText%d	URL		A URL that maps to the first-party privacy setting.
	ThirdPartyType	Numeric	4	An integer conveying an Internet Explorer privacy level for third-party cookies.
	ThirdPartyTypeText%d	URL		A URL that maps to the third-party privacy setting.

4.1.3.3   Ratrsop.INF File Format

An informative description of the setting names and legal values in Ratrsop.inf follows, which uses the definitions of value type from section 4.1.1. An example of this file format is provided in section 4.5.

SectionName	ValueName	Value type	Sample value	Description
GENERAL				
	Filename%d	Filename		The file name to be used by Internet Explorer for a website rating system.

SectionName	ValueName	Value type	Sample value	Description
	Allow_Unknowns	Boolean	1	View unknown rated sites.
	PleaseMom	Boolean	0	Password override enabled.
	Approved%d	URL		Viewable sites.
	Disapproved%d	URL		Unviewable sites.
	Bureau	String		Ratings bureau.

4.1.4   BMP File Format

The BMP files under SYSVOL must not be interpreted by the Group Policy: Internet Explorer Maintenance Extension protocol client or administrative tool plug-ins. For more information about BMP files, see [MSDN-BMPST].

4.1.5   ICO File Format

The ICO files under SYSVOL must not be interpreted by the Group Policy: Internet Explorer Maintenance Extension protocol client or administrative tool plug-ins. For more information on ICO files, see [MSDN-ICO].

4.1.6   CONNECT.RAS File Format

The format of this file must be as specified in the ABNF that follows. For more information on the RAS file format, see [MSDN-RAS]. The content of this file must not be interpreted by the Group Policy: Internet Explorer Maintenance Extension protocol; it is simply given directly to Internet Explorer.

```
RasFile = Version *RasEntry
Version = %x01.00.00.00
RasEntry = 1*Dword
DWord = 4Byte
Byte = %x00-FF
```

4.1.7   CS.DAT File Format

The format of this file must be as specified in the following ABNF. For more information, see [MSDN-RAS2], [MSDN-WININET1], and [MSDN-WININET2]. The content of this file must not be interpreted by the Group Policy: Internet Explorer Maintenance Extension protocol; it is simply given directly to Internet Explorer.

```
csfile = csversion csheader sszname *setting
csversion = %x02.00.00.00
csheader = %xDE.AD.BE.AF
setting = rassetting / credsetting / wininetsetting
rassetting = csras dwsize csrasentry
credsetting = cscred dwsize sszcredname sszcredpwd sszcreddomain
wininetsetting = cswininet dwsize sszconnection dwoption *csipco
sszname = sizedstring
csras = %xDE.AF.BE.AF
dwsize = dword
```

```
csrasentry = dwsize csdata
csdata = *byte
cscred = %xFE.ED.BA.CC
sszcredname = sizedstring
sszcredpwd = sizedstring
sszcreddomain = sizedstring
cswininet = %xDE.CA.FB.AD
sszconnection = sizedstring
dwoption = dword
csipco = dword
sizedstring = strsize 1*wchar
strsize = dword
dword = wchar wchar
wchar = byte byte
byte = %x00-FF
```

dwsize: A 32-bit unsigned integer in little-endian order that must specify the number of octets in the csdata field.

csdata: A binary large object (BLOB) of data to be passed uninterpreted to Internet Explorer settings. The number of octets must be equal to the value in the dwsize field.

strsize: A 32-bit unsigned integer in little-endian order that must specify the number of **Unicode** characters in the sizedstring field.

sizedstring: A BLOB of data to be passed uninterpreted to Internet Explorer settings. The number of octets must be equal to two times the value in the strsize field.

4.2   INSTALL.INS Example

In this example, a system administrator chooses to not allow users in her group to configure proxy settings on their local machines. She, therefore, chooses to use the Internet Explorer Maintenance (IEM) Group Policy Extension to configure key proxy settings, such as "Address of Proxy Servers" and "Exceptions" list. The IEM Group Policy Extension not only helps those users by automatically providing them the correct proxy address, but it also helps the administrator manage users in her organizational unit by guaranteeing that they use the same settings, which she can modify, as necessary.

For example, suppose the administrator wants her users to use myproxy.mycorp.com as the proxy address for all URLs except those matching "http://*.mycorp.com".

For this example, the IEM install.ins would be as follows (adhering to the layout specified in section 2.2.1) on the remote storage location in a GPO path, such as "\\Redmond\SYSVOL\Redmond\Policies\{*GPO-GUID*}\user\Microsoft\IEAK". The text "*GPO-GUID*" must be replaced with the appropriate **GPO GUID** from the running **Group Policy server** for example "\\Redmond\SYSVOL\Redmond\Policies\{E11F4FD7-25E3-4069-876B-B8C90C4A61AF}\user\Microsoft\IEAK". This GPO path is written by the administrative tool extension (as defined in section 1.3.2):

```
[Proxy]
Proxy_Enable=1
HTTP_Proxy_Server=myproxy.mycorp.com:80
Use_Same_Proxy=1
Proxy_Override="http://*.mycorp.com;<local>"
[Branding]
```

```
GPVersion=6.0.5356.0
```

The IEM primary client-side plug-in when invoked then reads this configuration data from the path described above and changes the proxy settings to the address specified above. During this process, it also adds "http://*.mycorp.com" in the exception list as specified above by the configuration data. The client-side plug-in does not parse or interpret the settings or understand their semantics; it merely configures Internet Explorer with the values.

4.3   Examples of Seczones.INF, Authcode.INF, Ratings.INF, and Programs.INF

The INF file format is specified in section 4.1.3. These files must be placed according to the layout specified in section 2.2.1 on the remote storage location in a GPO path, such as "\\Redmond\SYSVOL\Redmond\Policies\{*GPO-GUID*}\user\Microsoft\IEAK". The text "*GPO-GUID*" must be replaced with the appropriate GPO GUID from the running Group Policy server; for example, "\\Redmond\SYSVOL\Redmond\Policies\{E11F4FD7-25E3-4069-876B-B8C90C4A61AF}\user\Microsoft\IEAK". This GPO path is written by the administrative tool extension. The following sections give examples of these INF file formats.

4.3.1   SECZONES.INF Example

The following is an example of the Seczones.INF file format.

```
[Version]
Signature=$Chicago$
AdvancedINF=2.5

[DefaultInstall]
RequiredEngine=SetupAPI,"Fatal Error - missing setupapi.dll"
CustomDestination=CustInstDestSection
AddReg=AddReg.Hkcu,AddReg.Hklm

[CustInstDestSection]
49000,49001,49002,49003=ProgramFilesDir,21
49100,49101,49102,49103=IEDir,21

[ProgramFilesDir]
HKLM,"SOFTWARE\Microsoft\Windows\CurrentVersion","ProgramFilesDir"
    ,,"%24%\Program Files"

[IEDir]
HKLM,"SOFTWARE\Microsoft\Windows\CurrentVersion\App Paths\
    iexplore.exe","Path",,"%49001%\Internet Explorer"

[AddReg.Hklm]
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones",,,""
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones\2",,,""
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones\2",DisplayName,,"Trusted sites"
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones\2",CurrentLevel,0x10001,00,10,01,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones\2",Flags,0x10001,47,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones\2",120A,0x10001,03,00,00,00
```

```
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones\2",1400,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    ZoneMap",,,""
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    ZoneMap",UNCAsIntranet,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    ZoneMap",AutoDetect,0x10001,01,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    ZoneMap\Domains",,,""
HKLM,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    ZoneMap\Domains\contoso.com\www",http,0x10001,02,00,00,00

[AddReg.Hkcu]
HKCU,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones",,,""
HKCU,"Software\Microsoft\Windows\CurrentVersion\Internet Settings\
    Zones\2",,,""
HKCU,"Software\Microsoft\Internet Explorer\New Windows",PlaySound,
    0x10001,01,00,00,00
HKCU,"Software\Microsoft\Internet Explorer\New Windows",UseSecBand,
    0x10001,01,00,00,00
HKCU,"Software\Microsoft\Internet Explorer\New Windows",BlockUserInit,
    0x10001,00,00,00,00
HKCU,"Software\Microsoft\Internet Explorer\New Windows",UseHooks,
    0x10001,01,00,00,00
HKCU,"Software\Microsoft\Internet Explorer\New Windows",AllowHTTPS,
    0x10001,00,00,00,00
HKCU,"Software\Microsoft\Internet Explorer\New Windows",BlockControls,
    0x10001,00,00,00,00
HKCU,"Software\Microsoft\Internet Explorer\New Windows",PopupMgr,
    0x10001,01,00,00,00
```

4.3.2 AUTHCODE.INF Example

The following is an example of the Authcode.INF file format.

```
[Version]
Signature=$Chicago$
AdvancedINF=2.5

[DefaultInstall]
RequiredEngine=SetupAPI,"Fatal Error - missing setupapi.dll"
CustomDestination=CustInstDestSection
AddReg=AddReg.Hkcu

[IeakInstall.Hkcu]
RequiredEngine=SetupAPI,"Fatal Error - missing setupapi.dll"
CustomDestination=CustInstDestSection
AddReg=AddReg.Hkcu

[CustInstDestSection]
49000,49001,49002,49003=ProgramFilesDir,21
49100,49101,49102,49103=IEDir,21

[ProgramFilesDir]
HKLM,"SOFTWARE\Microsoft\Windows\CurrentVersion","ProgramFilesDir",,"%24%\Program Files"
```

```
[IEDir]
HKLM,"SOFTWARE\Microsoft\Windows\CurrentVersion\App
Paths\iexplore.exe","Path",,"%49001%\Internet Explorer"

[AddReg.Hkcu]
HKCU,"Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software
Publishing\Trust Database\0",mjjngfjeninhealdcflmbmjjeddcpgha
bicgjfnidofeoilgbaedbnpcncepokfp,,"Contoso Test Root Authority"
HKCU,"Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software
Publishing\Trust Database\0",mhakmeenekpdljcgjcikfejnnbciilai
mngnindodflkogelilcgapilhnpjjoef,,"Test CodeSign CA"
```

4.3.3 RATINGS.INF Example

The following is an example of the Ratings.INF file format.

```
[Version]
Signature=$Chicago$
AdvancedINF=2.5

[DefaultInstall]
RequiredEngine=SetupAPI,"Fatal Error - missing setupapi.dll"
CustomDestination=CustInstDestSection
AddReg=AddReg.Hklm

[IeakInstall.Hklm]
RequiredEngine=SetupAPI,"Fatal Error - missing setupapi.dll"
CustomDestination=CustInstDestSection
AddReg=AddReg.Hklm

[CustInstDestSection]
49000,49001,49002,49003=ProgramFilesDir,21
49100,49101,49102,49103=IEDir,21

[ProgramFilesDir]
HKLM,"SOFTWARE\Microsoft\Windows\CurrentVersion","ProgramFilesDir",,"%24%\Program Files"

[IEDir]
HKLM,"SOFTWARE\Microsoft\Windows\CurrentVersion\App
Paths\iexplore.exe","Path",,"%49001%\Internet Explorer"

[AddReg.Hklm]
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings",Key,1,C3,C7,8A,54,57,D1,20,
6E,5B,22,4C,DA,09,E0,BE,4F
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings",Hint,,"Jack"
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings",FileName0,,"%11%\icrav03.ra
t"

HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default",Allow_Unknowns,0x1
0001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default",PleaseMom,0x10001,
01,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default",Enabled,0x10001,01
,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",n,0x10001,00,00,00,00
```

```
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",s,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",v,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",l,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",oa,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",ob,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",oc,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",od,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",oe,0x10001,02,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",of,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",og,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",oh,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\.Default\http://www.icra.org
/pics/vocabularyv03/",c,0x10001,00,00,00,00

HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default",NumSys,0
x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0",dwFlag
s,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0",errLin
e,0x10001,00,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y",PRNumPolicy,0x10001,01,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0",PRPolicyAttribute,0x10001,02,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0\PRPPolicySub",PRNumURLExpressions,0x10001,01,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0\PRPPolicySub\0",PRBUInternetPattern,0x10001,01,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0\PRPPolicySub\0",PRBUNonWild,0x10001,0D,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0\PRPPolicySub\0",PRBUSpecified,0x10001,1F,00,00,00
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0\PRPPolicySub\0",PRBUScheme,,"http"
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0\PRPPolicySub\0",PRBUHost,,"www.contoso.com"
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0\PRPPolicySub\0",PRBUPort,,"80"
HKLM,"Software\Microsoft\Windows\CurrentVersion\Policies\Ratings\PICSRules\.Default\0\PRPolic
y\0\PRPPolicySub\0",PRBUUrl,,"http://www.contoso.com"
```

4.3.4 PROGRAMS.INF Example

The following is an example of the Programs.INF file format.

```
[Version]
Signature=$Chicago$
AdvancedINF=2.5
```

```
[DefaultInstall]
RequiredEngine=SetupAPI,"Fatal Error - missing setupapi.dll"
CustomDestination=CustInstDestSection
AddReg=AddReg.Hkcu,AddReg.Hklm

[IeakInstall.Hkcu]
RequiredEngine=SetupAPI,"Fatal Error - missing setupapi.dll"
CustomDestination=CustInstDestSection
AddReg=AddReg.Hkcu

[IeakInstall.Hklm]
RequiredEngine=SetupAPI,"Fatal Error - missing setupapi.dll"
CustomDestination=CustInstDestSection
AddReg=AddReg.Hklm

[CustInstDestSection]
49000,49001,49002,49003=ProgramFilesDir,21
49100,49101,49102,49103=IEDir,21

[ProgramFilesDir]
HKLM,"SOFTWARE\Microsoft\Windows\CurrentVersion","ProgramFilesDir",,"%24%\Program Files"

[IEDir]
HKLM,"SOFTWARE\Microsoft\Windows\CurrentVersion\App
Paths\iexplore.exe","Path",,"%49001%\Internet Explorer"

[AddReg.Hklm]
HKLM,"Software\Clients\Calendar",,,"Microsoft Outlook"
HKLM,"Software\Clients\Contacts",,,"Microsoft Outlook"
HKLM,"Software\Clients\Mail",,,"Microsoft Outlook"
HKCR,"mailto",,,"URL:MailTo Protocol"
HKCR,"mailto",URL Protocol,,""
HKCR,"mailto",EditFlags,1,02,00,00,00
HKCR,"mailto\DefaultIcon",,,"C:\PROGRA~2\MICROS~2\Office14\OUTLOOK.EXE,-9403"
HKCR,"mailto\shell",,,"open"
HKCR,"mailto\shell\open\command",,,""C:\PROGRA~2\MICROS~2\Office14\OUTLOOK.EXE" -c IPM.Note
/m "%1""

[AddReg.Hkcu]
HKCU,"Software\Microsoft\Internet Explorer\Main",Check_Associations,,"yes"
HKCU,"Software\Microsoft\Internet Explorer\Default HTML Editor",Description,,"Notepad"
HKCU,"Software\Microsoft\Internet Explorer\Default HTML
Editor\shell\edit\command",,,"%11%\NOTEPAD.EXE %1"
```

4.4 SECZRSOP.INF Example

The INF file format is specified earlier in section 4.1.3. The following example demonstrates its use in describing the security zone settings for Internet Explorer through use of SECZRSOP.INF file. This file must be placed according to the layout specified in section 2.2.1 on the remote storage location in a GPO path, such as "\\Redmond\Sysvol\Redmond\Policies\{GPO-GUID}\user\Microsoft\IEAK" as written by the administrative tool extension.

```
[Security Imports]
Zones=5
IEESCEnabled=0
```

```
[Privacy]
AdvancedSettings=0
FirstPartyType=3
ThirdPartyType=3

[Zone0_HKCU]
DisplayName=Computer
Description=Your computer
Icon=explorer.exe#0100
CurrentLevel=0
Flags=33
Action0=1201:1
Action1=1200:0
Action2=1E05:196608
Action15=1C00:131072
Action18=1400:0
Action19=1405:0

[Zone1_HKCU]
DisplayName=Local intranet
Description=This zone is for all websites that are found on your
 intranet.
Icon=shell32.dll#0018
MinLevel=65536
RecommendedLevel=66816
CurrentLevel=66816
Flags=323
Action0=1201:3
Action1=1200:0
Action2=1E05:131072
Action15=1C00:131072
Action18=1400:0
Action19=1405:0
Mapping0=ftp://144.16.2.1

[Zone2_HKLM]
DisplayName=Trusted sites
Description=This zone contains websites that you trust not to
 damage your computer or data.
Icon=inetcpl.cpl#00004480
CurrentLevel=69632
Flags=71
Action0=1201:3
Action1=1200:0
Action2=1E05:131072
Action5=1A00:131072
Action15=1C00:65536
Action16=1402:0
Action18=1400:0
Action23=1804:1
Mapping0=www.contoso.com
```

4.5 RATRSOP.INF Example

The INF file format is specified earlier in section 4.1.3. The following example demonstrates its use in describing the Content Advisor (site ratings) settings for Internet Explorer through use of RATRSOP.INF file. This file must be placed according to the layout specified in section 2.2.1 on the remote storage location in a GPO path, such as "\\Redmond\SYSVOL\Redmond\Policies\{GPO-GUID}\user\Microsoft\IEAK" as written by the administrative tool extension.

```
[General]
FileName0=C:\Windows\system32\icrav03.rat
Allow_Unknowns=0
PleaseMom=1
Disapproved0=http://www.contoso.com
Approved0=http://www.microsoft.com
```

5   Security

5.1   Security Considerations for Implementers

None.

5.2   Index of Security Parameters

None.

6   Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Windows 2000 operating system

- Windows XP operating system

- Windows Server 2003 operating system

- Windows Vista operating system

- Windows Server 2008 operating system

- Windows 7 operating system

- Windows Server 2008 R2 operating system

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

<1> Section 1.3.2: This client-side plug-in uses a command exposed by Internet Explorer to configure Internet Explorer settings. The exposed command is:

rundll32.exe iedkcs32.dll,BrandInternetExplorer /mode:gp /ins:<INS-FILEPATH>

Where, <INS-FILEPATH> is the complete path of the INSTALL.INS file, which has been copied to a client computer by the client side plug-in.

<2> Section 1.7: The following versions of the Internet Explorer browser are supported on the listed operating systems.

Windows version	Internet Explorer version
Windows 2000	Internet Explorer 5, Internet Explorer 5.5, or Internet Explorer 6.
Windows XP	Internet Explorer 6, Internet Explorer 7, or Internet Explorer 8.
Windows Server 2003	Internet Explorer 6, Internet Explorer 7, or Internet Explorer 8.
Windows Vista and Windows Server 2008	Internet Explorer 7, Internet Explorer 8, or Internet Explorer 9.
Windows 7 and Windows Server 2008 R2	Internet Explorer 8 or Internet Explorer 9.

<3> Section 3.2.5: Windows uses the function ImpersonateLoggedOnUser() to achieve this impersonation.

Release: Monday, July 22, 2013

<4> Section 3.2.5: Windows copies these files to a temporary folder.

<5> Section 4.1.1: For more information on the Windows interpretation of these settings, see [MSFT-IEM].

7 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

8 Index