

Client Name: Symantec	
Product Name: Symantec Endpoint Client (SEP) Version 12, Symantec Network Access Control (SNAC) Version 12	Date: 8/8/2012

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Methods and Criteria

Product Information

Diagnostic testing was performed on a representative sampling of screens and components of the Symantec Endpoint Protection Client (SEP) and Symantec Network Access Control (SNAC). The clients were handled separately, as the overall system configuration of the Symantec Suite calls for the client product to reside on general user desktops. The Symantec client products primarily used the COM application programming interfaces, which all behave and communicate directly with the user's assistive technology directly through Microsoft Active Accessibility (with the exception of users of Windows Vista, where the MSAA interface is abstracted through another API, called the UI Automation API).

AT/Testing Tools

In order to obtain the most reliable results from application testing, the Symantec Endpoint Client and Symantec Network Access control were tested using a mix of techniques, all of which were performed manually. The Microsoft Windows MSAA Toolkit 2.0 was used for testing the application, to intercept the application calls that would occur between the Symantec Client and assistive technology (AT). The JAWS assistive technology screen reader (version 11 and 12) was tested against Symantec Endpoint Protection using a set of custom JAWS scripts developed by a third party. Non-mouse access was tested using the keyboard using tabbing, available Windows and application shortcuts, and access keys. An on overall visual inspection of the use of color and other visual elements was also used.

Testing Criteria

The application was tested primarily against the Section 508 of the Rehabilitation Act Standards for software and web applications, due to its mixed use of technology in its products.

- Section 508 of the Rehabilitation Act
- Software Applications & Operating Systems (1194.21)
- Functional Performance Criteria (1194.31)
- Help & Documentation (1194.41)
- Usability Guidelines (based off of general usability heuristic best practices, such as Nielsen's Heuristic Evaluation Guidelines)

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Executive Summary

The Symantec Endpoint Protection Client and Symantec Network Access Control meet MOST of the Section 508 compliance and accessibility standards, by use of MSAA. However, it fails to meet some of the standards, primarily with providing keyboard access to some product areas. The following issues were found application-wide, and are critical to bringing the products as close to Section 508 technical compliance as possible.

1194.21 –Software Applications & Operating Systems

(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually

The application does meet the criteria in many areas, but fails to provide tab order focus on a few elements, such as tables.

(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer

SNAC occasionally reported and crashed testing tools, such as the MSAA Inspect32 application as threats which were attempting to allocate memory. The Inspect32 tool uses the same techniques and API calls as assistive technology, and is indicative of potential issues.

(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes

The programs indicate the currently “focused” selection when using the keyboard in most areas throughout the applications. Furthermore, with the addition of JAWS scripts the current location of focus is possible to discern in most instances using assistive technology. Screens such as SEP’s status screen make use of JAWS’ CTRL-S feature allowing read back of additional status information for users of Assistive Technology.

(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text

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Although providing a label, many buttons in the applications do not provide *descriptive* labels for buttons and areas.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance

Some navigation buttons and information labels were not accessible due to the images representing the information not being focusable or providing descriptive summaries.

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VPAT Symantec Endpoint Client (SEP) Symantec Network Access Control (SNAC)

Since the VPAT must be comprehensive, all Section 508 issues on all pages must be corrected to achieve compliancy.

Supporting Features (second column on VPAT)	
Supports	Use this language when you determine the product fully meets the letter and intent of the Criteria.
Supports with Exceptions	Use this language when you determine the product does not fully meet the letter and intent of the Criteria, but provides some level of access relative to the Criteria.
Supports through Equivalent Facilitation	Use this language when you have identified an alternate way to meet the intent of the Criteria or when the product does not fully meet the intent of the Criteria.
Supports when combined with Compatible AT	Use this language when you determine the product fully meets the letter and intent of the Criteria when used in combination with Compatible AT. For example, many software programs can provide speech output when combined with a compatible screen reader (commonly used assistive technology for people who are blind).
Does not Support	Use this language when you determine the product does not meet the letter or intent of the Criteria.
Not Applicable	Use this language when you determine that the Criteria do not apply to the specific product.
Not Applicable - Fundamental Alteration Exception Applies	Use this language when you determine a Fundamental Alteration of the product would be required to meet the Criteria (see the access board standards for the definition of "fundamental alteration").

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1194.21 Software applications and operating systems

Criteria	Supporting Features	Remarks and explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports with Exceptions	The application meets the criteria in most areas, but fails to provide tab order focus in a few instances, such as tables.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports with Exceptions	The application no longer reports assistive technology as a security threat and blocks or crashes the assistive technology. On occasion memory allocations made by AT are blocked however it does not appear to have any impact on the ability of JAWS to read the screen.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that assistive technology can track focus and focus changes.	Supports when combined with Compatible AT	The program does indicate the currently "focused" selection when using the keyboard in most areas throughout the applications. On occasion, the current location of focus was difficult to discern in some instances using assistive technology.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to assistive technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports when combined with Compatible AT	Several buttons or controls in the applications that do not provide <i>descriptive</i> labels are described through JAWS AT.
(e) When bitmap images are used to identify controls, status indicators, or	Supports with Exceptions	Some navigation buttons and information labels were not

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other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.		accessible due to the images representing the information not being focusable or providing descriptive summaries.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports with exceptions	Some static text is not available through operating system functions for assistive technology.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Does Not Support	The screens within the application did not respect user selected font size and color adjustments via Windows Accessibility features.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supports	Product does not make use of animation
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.		
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports	Application does not provide inherent tools to produce color changes
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports	Application does not make use of blinking text or objects
(l) When electronic forms are used, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports with exceptions	Although providing a label, many buttons in the applications do not provide <i>descriptive</i> labels for buttons and areas.

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1194.31 Functional performance criteria

Criteria	Supporting Features	Remarks and explanations
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.	Supports with exceptions	On occasion memory allocations made by AT are blocked however it does not appear to have any impact on the ability of JAWS to read the screen. Reference 1194.21 for details.
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.	Does not support	On occasion memory allocations made by AT are blocked however it does not appear to have any impact on the ability of JAWS to read the screen. Reference 1194.21 for details.
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for assistive technology used by people who are deaf or hard of hearing shall be provided.	Supports	Audio is not used.
(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Supports	Audio is not used.
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for assistive technology used by people with disabilities shall be provided.	Supports	User speech is not required
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports with exceptions	Some functions are not keyboard accessible.

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Report Detail: Endpoint Client (SEP)

Status Area

All navigation push buttons are visible and focusable to our testing tools, and all menus and sub screens did not exhibit any non-visible areas. Screens such as SEP's status screen make use of JAWS' CTRL-S feature allowing read back of additional status information for users of Assistive Technology.



Figure 1

Scan for Threats Area

All graphics inside the 'Scan for threats' page are tagged, and labels are exposable to our testing tools. The 'Scans' table is in keyboard tab order and accessible to someone using a keyboard only. The table makes proper use of table headers and has no other accessibility issues.

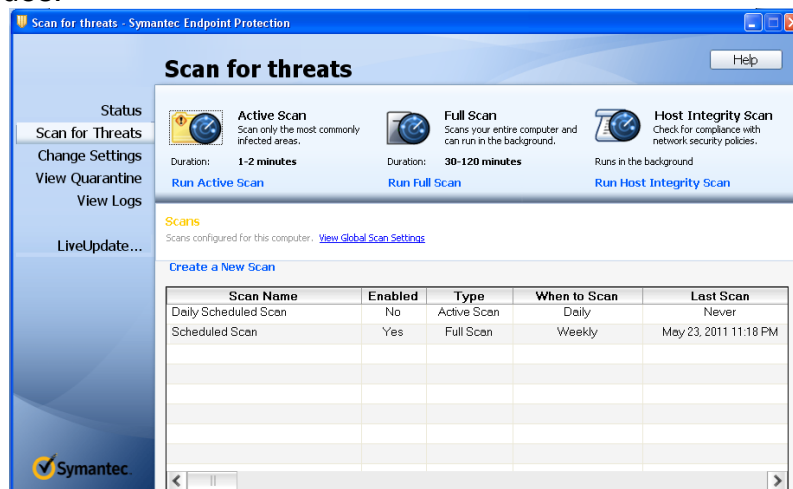


Figure 2

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Change settings

Navigation improvements in this release resolved three issues previously identified in this area. Configure Settings buttons are now visible to assistive technology testing tools and all tab navigation within the 'Change Settings' area is reachable via the keyboard.

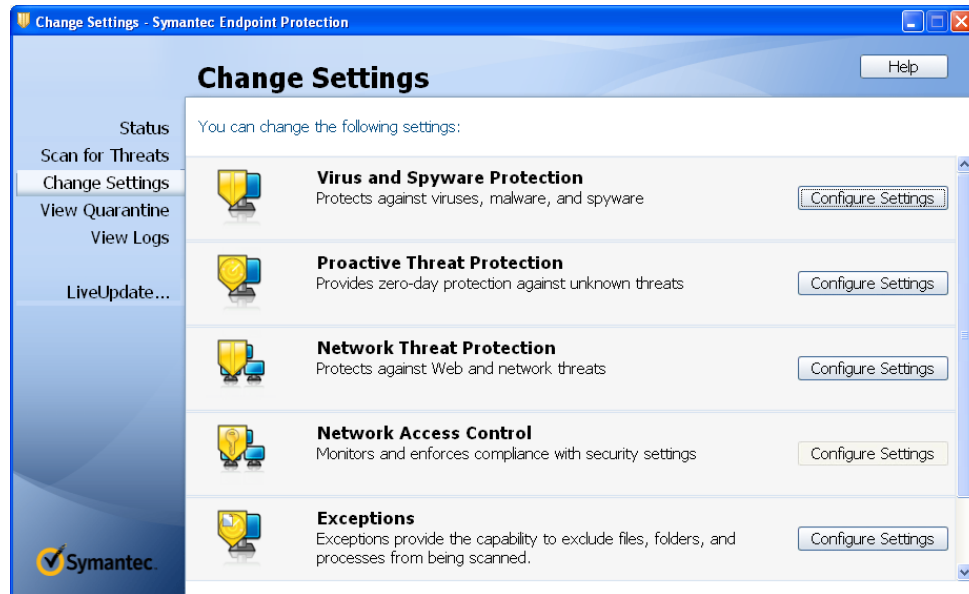


Figure 3

View Quarantine

All buttons and labels were visible to our testing tools.

Issues

In the 'Risk Details' window, tables were not visible to our testing tools, and were not in the keyboard tab order

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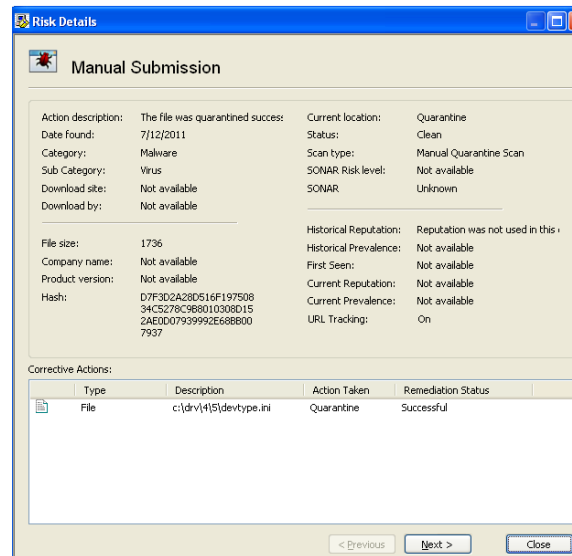


Figure 4

View Logs

Issues

All 'View Logs' buttons and information labels are visible to our testing tools and are visible to assistive technology.

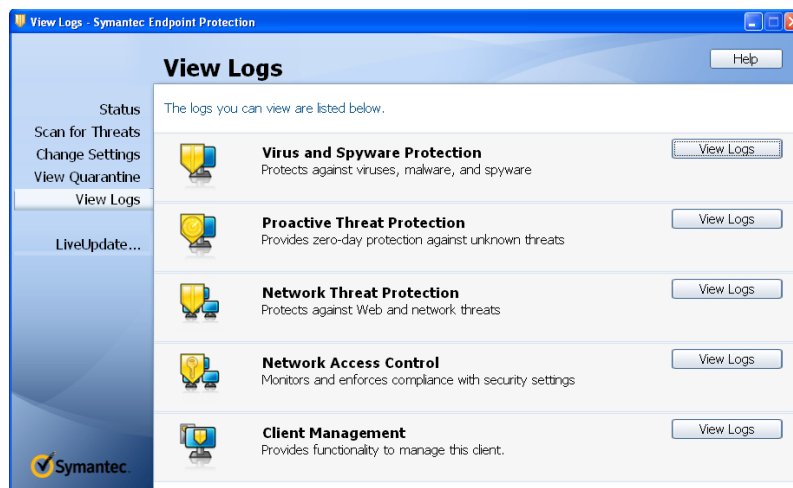


Figure 5

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LiveUpdate

No serious issues were found with the LiveUpdate client

Issue

The LiveUpdate Status box may present usability issues to people using screen readers or other linearizing technology. In extreme cases, such as the one pictured below, the user may need to listen to dozens and dozens of status messages. Use of JAWS' expanded keyboard features allows read back of all LiveUpdate messages.

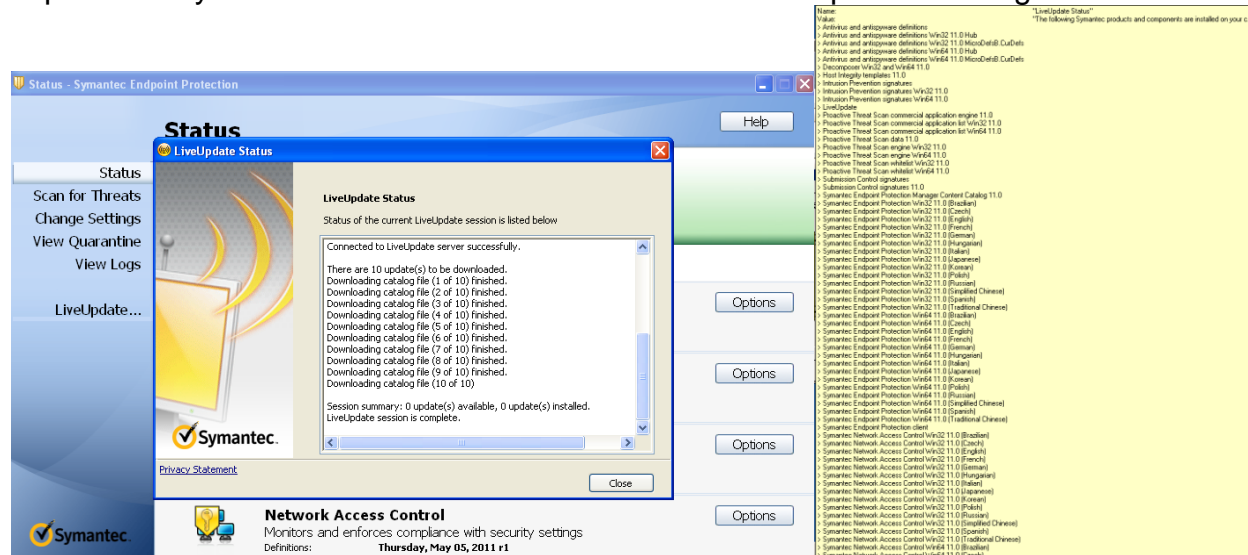


Figure 6

Symantec Network Access Client

Navigation menu buttons (e.g., Status, Scan from threats, etc.) were visible to our testing tools. Sub-menu items, such as 'Protection Technologies', were also visible to our testing tools, and reachable using the keyboard. The graphic stating the status of the computer (e.g., "Your computer is protected") was visible to our testing tools

Issue

The status label should be placed in the tab order, or higher in the label order (e.g., near top of page, before navigation menu) so that users using special tools can access the information faster.

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Figure 7

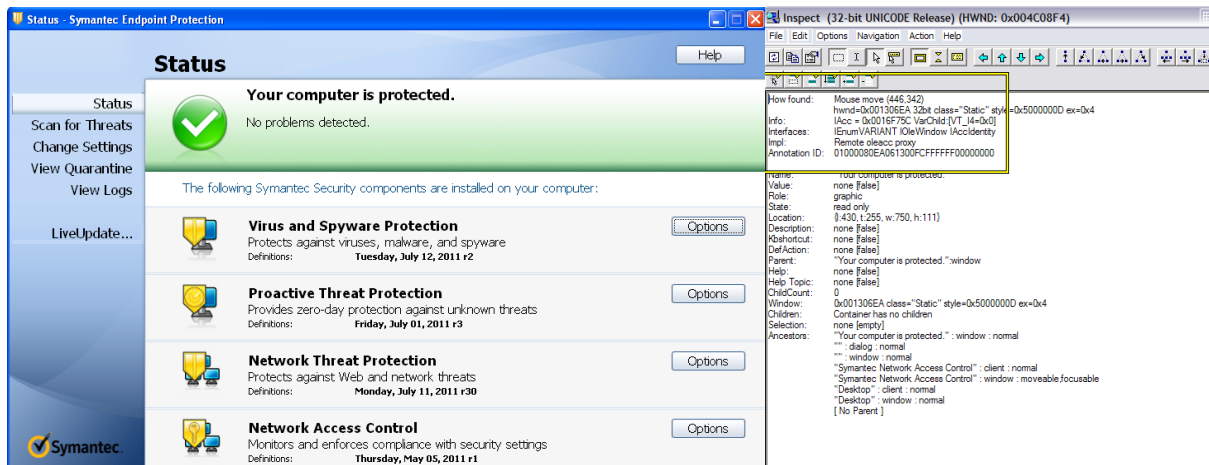


Figure 8

General Remarks

Overall, the Symantec Endpoint client came close to meeting all Section 508 criteria for functional access, with the exception to some non-labeled areas that were not accessible via keyboard. During our testing the Symantec Client occasionally reported memory allocation blocks by our accessibility testing tools, even though the SPI_SCREENREADER flag was set (identifying our testing tool as a screen reading application). The application should ensure that it monitors for assistive technologies and does not interfere with them.

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Understanding the TecAccess Reports

Executive Summary

The Executive Summary is a preview of the main points of our testing results; its goal is to provide a condensed version of the longer report's content. This report should help determine the key results of our findings.

Accessibility Report

The Accessibility Report is a compilation of explanations of Section 508 standards and Worldwide Web Consortium Web Accessibility Guidelines (WCAG) that specifically pertain to the testing of your product. Each explanation offers techniques on how the standard can be applied and provides specific examples that are taken from our test cases on your product.

Section 508 Standards

All Section 508 issues are considered critical. Therefore, they must be remediated to achieve compliance with the Section 508 Technical Standards.

Resources

Guidelines For Keyboard User Interface Design

<http://msdn2.microsoft.com/en-us/library/ms971323.aspx>

Microsoft Active Accessibility

<http://msdn2.microsoft.com/en-us/library/ms697707.aspx>

Accessibility at Microsoft

<http://www.microsoft.com/enable/>