



# vSphere vCenter Server VPAT© 4.1

July 8, 2010



## VPAT®

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

Summary of Voluntary Product Accessibility Template		
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<i>Criteria</i>	<i>Supporting Features</i>	<i>Remarks &amp; Explanations</i>
Section 1194.21 Software Applications and Operating Systems	Supports with Exceptions	Please reference the attached 1194.21 section.
Section 1194.22 Web-based Internet Information and Applications	Supports with Exceptions	The Web based GUI accessed through the VMWare VI Web Access Client 4.1 allows access to vCenter Server 4.1  Please reference the attached 1194.22 section.
Section 1194.23 Telecommunications Products	Not Applicable	
Section 1194.24 Video and Multimedia Products	Not Applicable	
Section 1194.25 Self-contained, Closed Products	Not Applicable	
Section 1194.26 Desktop and Portable Computers	Not Applicable	
Section 1194.31 Functional Performance Criteria	Supports with Exceptions	Please reference the attached 1194.21, 1194.22 and 1194.31 sections.
Section 1194.41 Information, Documentation and Support	Supports	Please reference the attached 1194.41 section.

**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 Assistive Technology ("AT"). For example, many software programs can provide speech output when combined with a compatible screen reader (commonly used AT 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 the Criteria does 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's standards for the definition of "fundamental alteration").

1194.21 Software Applications and Operating Systems		
<i>Criteria</i>	<i>Supporting Features</i>	<i>Remarks &amp; Explanations</i>
<p>(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.</p>	<p>Supports with Exceptions</p>	<p>The Windows based GUI accessed through the VMware vSphere client 4.1 allows a good deal of keyboard accessibility. Buttons in the main interface can be reached via the tab key, menus can be activated and chosen, and items such as the “<i>Hosts and Clusters</i>” can be used via the keyboard.</p> <p>Exceptions do exist. The tabs in the interfaces such as “<i>Hosts and Clusters</i>” cannot be activated via the keyboard, e.g., the “<i>Datacenters</i>,” “<i>Hosts</i>,” “<i>Tasks and Events</i>” and “<i>Alarms</i>” tabs. While tabbing will place focus on these buttons, they cannot be activated via the Enter or Space keys, which is the Windows standard which is used with Assistive Technology.</p> <p>The Web based interface does not allow keyboard access to all screens and all functions.</p> <p>Many links of dialogs such as those found on the Configuration screen accessed through the individual Hosts screen cannot be accessed or activated via the keyboard.</p> <p>In addition the focus will lock on some fields making it impossible to navigate via the keyboard. An example can be seen in the Configuration screen accessed through the individual Hosts screen.</p>

1194.21 Software Applications and Operating Systems

1194.21 Software Applications and Operating Systems, continued

1194.21 Software Applications and Operating Systems, continued		
<i>Criteria</i>	<i>Supporting Features</i>	<i>Remarks &amp; Explanations</i>
<p>(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.</p>	<p>Supports with Exceptions</p>	<p>Virtual Infrastructure - vCenter Server 4.1 does interrupt or disable AT or AT features.</p> <p>This is true for the web based interface as well.</p> <p>See 1194.21 (a)</p>
<p>(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.</p>	<p>Supports with Exceptions</p>	<p>AT can track focus changes and determine what interactive interface element has the current focus in many cases. Focus can also be tracked visually in some cases.</p> <p>However, the focus moves to areas without text displayed on the screen and they will be read aloud by screen readers and do not represent items on the screen. An example of this is on the Configuration screen accessed through the individual Hosts screen.</p> <p>In addition the focus can become locked on the screen. An example of this is the locking of the focus on selected screens such as the Configuration screen.</p> <p>The Web based interface does not allow keyboard access to all screens and all functions and can lock on the screen.</p> <p>See 1194.21 (a) and (b)</p>

(d) Sufficient information about a user interface element including the <del>Clarity</del> , 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 with <del>Supporting Features</del>	Many controls have sufficient information for identifying them <del>Reaching &amp; Explaining</del> state and value information provided through Microsoft Active Accessibility (MSAA).  However, controls do exist that do not have identifying information that assistive technology can use.  See 1194.21(a)
(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.	Supports	Image meaning is consistent.
(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	Text is available through the operating system and AT can read it in many cases, however there are examples when text is not being read or provided through operating system functions.  See 1194.21 (d)
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports with Exceptions	Virtual Infrastructure - vCenter Server 4.1 does not honor or extend all Windows high contrast or large font settings.  Some of the high contrast is passed along from Windows, and text size remains the same when Windows is set for High Contrast Large Fonts. Text is enlarged with AT.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	Animation is not used.

**1194.21 Software Applications and Operating Systems, continued**

<p>(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.</p>	<p>Supports with Exceptions</p>	<p>The page tabs are displayed in a dark grey and the currently selected tab is white without any text equivalent.</p>
<p>(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.</p>	<p>Not Applicable</p>	<p>The Windows based GUI accessed through the VMware vSphere client 4.1 does not permit a user to adjust color or contrast settings.</p>
<p>(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.</p>	<p>Supports</p>	<p>Blinking and flashing does not occur in the prohibited range.</p>
<p>(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</p>	<p>Supports with Exceptions</p>	<p>Many controls have sufficient information for identifying them including name, role, state and value information provided through Microsoft Active Accessibility (MSAA).</p> <p>Some controls which are links or buttons are not identified as interactive interface elements through the Role property of MSAA.</p> <p>An example of this is some of the links under the “Hardware” and “Software” sections of the Configuration screen.</p> <p>See 1194.21 (d) and (f)</p>



**1194.22 Web-based Internet Information and Applications**

<i>Criteria</i>	<i>Supporting Features</i>	<i>Remarks &amp; Explanations</i>
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports with Exceptions	<p>Not all images which convey important information have Alt attributes. When accessed through the Virtual Infrastructure - VI Web Access Client 4.1.</p> <p>For example, some images are background images which are linked and do not have alt attributes or title tags on the images or links.</p> <p>Images that appear to be spacer images also do not have alt tags or text equivalents.</p>
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	No Multimedia is present.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports	Color is not used as a sole means of conveying information.
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Does Not Support	When Style Sheets are disabled the page is not usable.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	Server-side image maps are not used.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	Client-side image maps are not used.
(g) Row and column headers shall be identified for data tables.	Does Not support	Header cells are not denoted using TH tags for data tables, e.g., the topic "VMware Infrastructure Client Window > Menu Bar."
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Not Applicable	Data tables with two or more logical levels are not present.

1194.22 Web-based Internet Information and Applications, continued		
Criteria	Supporting Features	Remarks & Explanations
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Does Not Support	Iframes are used but do not have meaningful identification such as title tags.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports	Flickering does not occur in the prohibited range.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	A text only page is not needed to the application.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports with Exceptions	Not all Interfaces are keyboard accessible or readable.  See 1194.21(a), (b), (c), and (d)
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Not Applicable	Plug-ins are not used.
(n) When electronic forms are designed to be completed on-line, 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.	Not Applicable	No electronic forms are used.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Does Not Support	No Link is provided to move over repetitive Navigation.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	There are no timed responses required.

1194.31 Functional Performance Criteria		
<i>Criteria</i>	<i>Supporting Features</i>	<i>Remarks &amp; Explanations</i>
(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	Virtual Infrastructure - vCenter Server 4.1 has some limitations that do not allow full support for screen reader AT. Please reference the included 1194.21 and 1194.22 sections for specific 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.	Supports with Exceptions	Screen magnifiers do work with Virtual Infrastructure, however the product does not honor all Windows color and high contrast settings and increased text size.  Please reference the included 1194.21 section for specific 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	Hearing is not required.
(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.	Not Applicable	Audio is not present.
(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 to access content.

1194.31 Functional Performance Criteria

<b>1194.31 Functional Performance Criteria, continued</b>		
<b><i>Criteria</i></b>	<b><i>Supporting Features</i></b>	<b><i>Remarks &amp; Explanations</i></b>
(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 user interface elements are not keyboard accessible. Please refer to 1194.21 for details.

1194.31 Functional Performance Criteria, continued

1194.41 Information, Documentation and Support		
<i>Criteria</i>	<i>Supporting Features</i>	<i>Remarks &amp; Explanations</i>
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports	Upon request, product support documentation shall be made available in other printed or online formats that VMware has available at the time of the request, at no additional charge.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports	Upon request, product support documentation shall be made available in other printed or online formats that VMware has available at the time of the request, at no additional charge.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports	Support is available online and via telephone. Deaf or hard of hearing users can use the national relay service to converse with VMware representatives.