

# Red Hat Open Stack Platform Accessibility Conformance Report

**Date:** 13 June 2018

**Product Name:** Red Hat OpenStack Platform

**Product Version:** 11

The Voluntary Product Accessibility Template (VPAT) allows federal contracting officials and other buyers in making preliminary assessments regarding the availability of commercial electronic and IT products and services with features that support accessibility.

Red Hat® assumes and recommends that offerers will provide additional contact information to facilitate more detailed inquiries.

## Success Criteria Summary Table

Criteria	Conformance Level	Remarks and Explanations
Section 1194.21 Software Applications and Operating Systems	Please refer to Section 1194.21 below	This section is relevant for the command line portion of Open Stack Director and Horizon.
Section 1194.22 Web-based Internet Information and Applications	Please refer to Section 1194.22 below	Refer to <a href="#">Section 1194.22</a> details below.
Section 1194.23 Telecommunications Products	Not applicable	Open Stack is not a telecommunication product.
Section 1194.24 Video and Multi-media Products	Not applicable	Open Stack is not a video or multi-media product.
Section 1194.25 Self-Contained, Closed Products	Not applicable	Open Stack is not a self contained, closed product.
Section 1194.26 Desktop or Portable Computer	Not applicable	Open Stack is not desktop or portable computer
Section 1194.31 Functional Performance	Please refer to Section	

Criteria	1194.31 below	
Section 1194.41 Information, Documentation and Support	Please refer to Section 1194.41 below	

## Section 1194.21 Software Applications and Operating Systems - Detail<sup>1</sup>

Criteria	Conformance Level	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	
(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	
(c) A well defined onscreen 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	Not applicable	This is not applicable to a command line tool
(d) Sufficient information about a user interface element including the identity,	Not applicable	This is not applicable to a

<sup>1</sup> The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium: Paragraph (a) - 1.1, (b) - 1.4, (c) - 2.1, (d) - 6.1, (e) - 1.2, (f) - 9.1, (g) - 5.1, (h) - 5.2, (i) - 12.1, (j) - 7.1, (k) - 11.4.

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.		command line tool
(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.	Not applicable	This is not applicable to a command line tool
(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	
(g) Applications shall not override user selected contrast and color selections and other individual display attributes	Supports	
(h) When animation is displayed, the information shall be displayable in at least one nonanimated presentation mode at the option of the user.	Not applicable	This is not applicable to a command line tool
(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.	Supports	
(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.	Not applicable	This is not applicable to a command line tool
(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	
(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	Not applicable	This is not applicable to a command line tool

form, including all directions and cues		
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## Section 1194.22 Web-based Internet information and applications – Detail<sup>2</sup>

Criteria	Conformance Level	Remarks and explanations
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Does not support	
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not applicable	No multimedia presentations are used at Open Stack
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Does not Support	
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Does not Support	
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	Server-side 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 maps are not used
(g) Row and column headers shall be identified for data tables.	Supports with Exceptions	Extension consoles are not Supports.
(h) Markup shall be used to	Supports with	Not applicable to the

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associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Exceptions	Open Stack console
(i) Frames shall be titled with text that facilitates frame identification and navigation	Support with Exceptions	Not applicable to the Open Stack console
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	
(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.	Does not Support	
(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.	Does not Support	Scripts are used to display content and key features
(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	No plug-ins or applets are required
(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.	Does Not Support	

(o) A method shall be provided that permits users to skip repetitive navigation links.	Does not support	
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not applicable	

## Section 1194.23 Telecommunications Products - Detail<sup>3</sup>

Criteria	Conformance Level	Remarks and explanations
(a) Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard nonacoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use	Not applicable	
(b) Telecommunications products which include voice communication functionality shall support all commonly used crossmanufacturer nonproprietary standard TTY signal protocols.	Not applicable	
(c) Voice mail, autoattendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.	Not applicable	
(d) Voice mail, messaging, autoattendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, Not applicable shall give an alert when the time interval	Not applicable	

<sup>3</sup> The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium: Paragraph (a) - 1.1, (b) - 1.4, (c) - 2.1, (d) - 6.1, (e) - 1.2, (f) - 9.1, (g) - 5.1, (h) - 5.2, (i) - 12.1, (j) - 7.1, (k) - 11.4.

is about to run out, and shall provide sufficient time for the user to indicate more time is required.		
(e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.	Not applicable	
(f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided.	Not applicable	
(g) If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use	Not applicable	
(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.	Not applicable	
(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.	Not applicable	
(j) Products that transmit or conduct information or communication, shall pass through crossmanufacturer, nonproprietary, industrystandard codes, translation protocols, formats or other information necessary to provide the Not applicable information or communication in a usable format. Technologies which use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for	Not applicable	

access or shall restore it upon delivery.		
(k)(1) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be tactilely discernible without activating the controls or keys.	Not applicable	
(k)(2) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be operable with one hand and shall not require tight grasping, pinching, twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2N) maximum.	Not applicable	
(k)(3) Products which have mechanically operated controls or keys shall comply with the following: If key repeat is Supports, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.	Not applicable	
(k)(4) Products which have mechanically operated controls or keys shall comply with the following: The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.	Not applicable	

## Section 1194.24 Video and Multi-media Products - Detail<sup>4</sup>

Criteria	Conformance Level	Remarks and explanations
(a) All analog television displays 13 inches and larger, and computer	Not applicable	

<sup>4</sup> The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium: Paragraph (a) - 1.1, (b) - 1.4, (c) - 2.1, (d) - 6.1, (e) - 1.2, (f) - 9.1, (g) - 5.1, (h) - 5.2, (i) - 12.1, (j) - 7.1, (k) - 11.4.



<p>equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and standalone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.</p>		
<p>(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry</p>	<p>Not applicable</p>	
<p>(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned</p>	<p>Not applicable</p>	
<p>(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.</p>	<p>Not applicable</p>	
<p>(e) Display or presentation of alternate text presentation or audio descriptions shall be userselectable unless permanent.</p>	<p>Not applicable</p>	

## Section 1194.25 Self Contained Closed Products - Detail<sup>5</sup>

Criteria	Conformance Level	Remarks and explanations
(a) Self contained products shall be usable by people with disabilities without requiring an enduser to attach Assistive Technology to the product. Personal headsets for private listening are not Assistive Technology.	Not applicable	
(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required	Not applicable	
(c) Where a product utilizes touchscreens or contactsensitive controls, an input method shall be provided that complies with 1194.23 (k) (1) through (4).	Not applicable	
(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.	Not applicable	
(e) When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime	Not applicable	
(f) When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65	Not applicable	

<sup>5</sup> The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium: Paragraph (a) - 1.1, (b) - 1.4, (c) - 2.1, (d) - 6.1, (e) - 1.2, (f) - 9.1, (g) - 5.1, (h) - 5.2, (i) - 12.1, (j) - 7.1, (k) - 11.4.

<p>dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.</p>		
<p>(g) 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>Not applicable</p>	
<p>(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.</p>	<p>Not applicable</p>	
<p>(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz..</p>	<p>Not applicable</p>	
<p>(j) (1) Products which are freestanding, nonportable, and intended to be used in one location and which have operable controls shall comply with the following: The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48 inch length on products which are freestanding, nonportable, and intended to be used in one location and which have operable controls.</p>	<p>Not applicable</p>	
<p>(j)(2) Products which are freestanding, nonportable, and intended to be used in one location and which have operable Not applicable controls shall comply with the following: Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and 15 inches minimum above the floor</p>	<p>Not applicable</p>	
<p>(j)(3) Products which are freestanding,</p>	<p>Not applicable</p>	

nonportable, and intended to be used in one location and which have operable controls shall comply with the following: Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor		
(j)(4) Products which are freestanding, nonportable, and intended to be used in one location and which have operable controls shall comply with the following: Operable controls shall not be more than 24 inches behind the reference planer.	Not applicable	

## Section 1194.26 Desktop and Portable Computers - Detail<sup>6</sup>

Criteria	Conformance Level	Remarks and explanations
(a) All mechanically operated controls and keys shall comply with 1194.23 (k) (1) through (4)	Not applicable	
((b) If a product utilizes touchscreens or touchoperated controls, an input method shall be provided that complies with 1194.23 (k) (1) through (4).	Not applicable	
(c) Where a product utilizes touchscreens or contactsensitive controls, an input method shall be provided that complies with 1194.23 (k) (1) through (4).	Not applicable	
(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards	Not applicable	

<sup>6</sup> The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium: Paragraph (a) - 1.1, (b) - 1.4, (c) - 2.1, (d) - 6.1, (e) - 1.2, (f) - 9.1, (g) - 5.1, (h) - 5.2, (i) - 12.1, (j) - 7.1, (k) - 11.4.

## Section 1194.31 Functional Performance Criteria – Detail

<b>Criteria</b>	<b>Conformance Level</b>	<b>Remarks and explanations</b>
(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	Open Stack supports a full featured command line tool which can be used with screen readers.
(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	Open Stack supports a full featured command line tool which can be used with screen readers.
(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	Not applicable	Open Stack does not utilize audio feedback

<p>(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.</p>	<p>Not applicable</p>	<p>Open Stack does not utilize audio feedback</p>
<p>(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.</p>	<p>Not applicable</p>	<p>Open Stack does not utilize speech input</p>
<p>(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.</p>	<p>Not applicable</p>	

## Section 1194.41 Information, Documentation and Support – Detail

<p><b>Criteria</b></p>	<p><b>Conformance Level</b></p>	<p><b>Remarks and explanations</b></p>
<p>(a) Product support documentation provided to end-users</p>	<p>Supports</p>	<p>Red Hat Open Stack Platform support documentation available in</p>

shall be made available in alternate formats upon request, at no additional charge		accessible HTML format.
(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	Accessibility features are outlined in the VPAT above. Descriptions of these features can be made available in different formats on request and at no additional charge.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports	

**APPENDIX A (OF THE DOS VPAT/GPAT CHECKLIST)**

**SUGGESTED LANGUAGE FOR FILLING OUT THE VPAT/GPAT**

In order to simplify the task of conducting market research assessments for procurement officials or customers, ITIC

(Information Technology Industry Council) has developed suggested language for use when filling out a VPAT/GPAT.

You may choose to employ all or some of the language below. Once you determine what language you intend to use,

we recommend that use is consistent throughout all of your VPAT/GPATs.

**SUPPORTING FEATURES (COLUMN 2 ON VPAT/GPAT)**

**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").**