Avaya Communication Manager 5.1
Voluntary Product Accessibility Template (VPAT)

§ 1194.21 Software Applications and Operating Systems

The responses to the requirements in § 1194.21 refer to the Avaya Communication Manager 5.1 administrative interfaces. In many cases, these interfaces will be located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment, and therefore *may* qualify for exemption under 1194.3(f), General Exceptions. Information about these interfaces is being provided because contract officers are not obligated to grant this exemption.

The Avaya Communication Manager 5.1 is administered using the following three different tools or methods:

- **A text-only interface, referred to in Avaya documentation as the System Access Terminal or SAT.**
- **A Microsoft® Windows® thick-client application, referred to in Avaya documentation as Avaya Site Administration or SA. This application combines elements of the text-only SAT interface with Avaya's Graphically Enhanced Definity® Interface ("GEDI"). In addition, the SA tool includes wizards that make it easier to perform common administrative functions.**
- **A browser-based graphical interface.**

Generally speaking, the browser interface is used by Avaya personnel and business partners to support initial installation and upgrades. In most cases, the routine administrative tasks performed by owners of Communication Manager systems are managed via the SAT and SA tools. Unless otherwise specified, the information in this document refers to the SA tool. (NOTE: The Avaya Intuity™ AUDIX® IA-770 messaging server, which is included with some configurations of Communication Manager 5.1, is administered via a separate mechanism. The statements in this document do not apply to the IA-770 administrative interfaces.)

The SA tool pre-dates the Section 508 rules by several years. Over one hundred different station characteristics are accessible via this tool, often from within screens that are specific to the function being controlled. It has been Avaya's experience that the vast majority of operations performed by Communication Manager administrators are in a category commonly referred to as "MAC" tasks: Moves, Adds, and Changes. The statements of conformance in this document are limited to MAC operations performed via the SA tool and associated wizards. Avaya does *not* certify that the conformance statements are valid for all of the screens that may be presented by the SA tool. It should be assumed that service personnel and system administrators who require the support of assistive technologies may be unable to perform many of the tasks associated with the initial physical installation, system setup and upgrades, as well as some of the less frequent and more complex administrative tasks.

Criteria	*Supporting Features*	*Remarks and Explanations*
1194.21(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	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	All MAC functions presented by the SA tool and associated wizards are executable from the keyboard. All system responses for these operations are presented in standard ASCII or Unicode text.

textually.		
1194.21(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.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	The SA tool and associated wizards do not disrupt or disable the accessibility features of operating systems, nor do they disrupt or disable the features or settings of other software applications.
1194.21(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 SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	Unless something other than the default Microsoft Windows color scheme has been selected, the SA tool and associated wizards present text in a bold black font against a light tan background. Data entry fields use the same bold black font against a white background. The “current focus” is indicated by white text (same font) against a navy blue background. The location and changes in focus are displayed visually and exposed programmatically.
1194.21(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.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	All MAC information presented by the SA tool and associated wizards is displayed as text.
1194.21(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.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	All MAC information presented by the SA tool and associated wizards is displayed as text. There are no bitmap images that provide information to the user or serve as controls, status indicators, or other programmatic elements.
1194.21(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.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	All MAC information presented by the SA tool and associated wizards is provided to the operating system as either ASCII or Unicode text.
1194.21(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	The default contrast and color schemes for the SA tool and associated wizards are described in the Remarks for requirement 1194.21(c). It is possible to change these characteristics as part of the overall environment via the “Appearance” tab on the “Display

		Properties" function within Microsoft Windows. The font type and size settings in the SA tool are user configurable from within the application.
1194.21(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	All MAC information presented by the SA tool and associated wizards is displayed as text. There is no animation.
1194.21(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.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	All MAC information presented by the SA tool and associated wizards is displayed as text. There is no color coding.
1194.21(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.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	The color and contrast settings for the SA tool and associated wizards are controlled by the user's operating system. Adjustments are made via the "Appearance" tab on the "Display Properties" function within Microsoft Windows.
1194.21(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.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	The SA tool and associated wizards do not present text, objects, or elements that flash or blink. The blink rate of the cursor is controlled by the user's operating system.
1194.21(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.	The SA tool and associated wizards for Avaya Communication Manager 5.1 conform to this requirement when used to administer MAC functions.	The text entry fields that are presented by the SA tool and associated wizards are labeled in a manner that permits assistive technologies to discover and report the field identifiers.

§ 1194.23 Telecommunications Products

Criteria	***Supporting Features***	***Remarks and Explanations***
1194.23(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 non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.	Avaya Communication Manager 5.1 conforms to this requirement.	Most TTYs that permit an electronic, non-acoustic connection to the telephone network do so through RJ-11 tip/ring connectors of the sort found on residential analog telephone equipment. Avaya Communication Manager can be configured with industry standard RJ-11 analog ports would permit the direct connection of standard TTY devices. Alternatively, many Avaya telephones can be configured with RJ-11 ports, thereby allowing TTYs to be connected to the network via a jack on the telephones rather than via direct connection to Communication Manager.

		There is no aspect of Communication Manager that would disrupt the ability of a microphone-equipped device to support the intermixing of speech and TTY use.
1194.23(b) Telecommunications products, which include voice communication functionality, shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.	Avaya Communication Manager 5.1 conforms to this requirement.	When communicating via analog links, Avaya Communication Manager transmits all TTY signals, regardless of protocol, in their original analog format. When communicating via IP links with other appropriately configured and enabled Avaya systems, Avaya Communication Manager encodes analog 45.45 baud Baudot TTY signals (the TTY format most commonly used in the US) and 50 baud Baudot signals (a format commonly used outside of the US in countries such as Australia, Ireland, and the UK) as redundant data packets that, in essence, contain descriptions of the tones rather than the tones themselves. The encoding format for these descriptive packets conforms to RFC-2833, an international standard for the transmission of audio tones on IP networks. The receiving systems use these descriptions to reconstruct the original analog TTY signals. Independent testing has verified that this Avaya approach provides reliable transport of TTY signals with packet loss rates up to 10%, even when G.729 compression is being used on the audio channels. A mechanism commonly used by other vendors is to transport the TTY signals within IP networks as uncompressed G.711 audio packets. In addition to the approach described in the previous paragraph, the Avaya TN2302, TN2602, G250, G350, G450, G550, and G700 VoIP modules also support an Avaya-only G.711 “pass-through” approach similar to that used by others. Specifically, when used in pass-through mode, the firmware of these modules detects the audio tones that indicate the type of device being used (FAX, modem, or TTY) and then uses G.711 to encode and transport the signals over the IP network. Note that Avaya pass-through mode provides higher quality transmission when endpoints are synchronized to the same clock source. Note also that some text

		telephony modem protocols such as 300 baud and 1200 baud ASCII, as well as the non-Baudot V.18 protocols commonly used outside the US, are not supported by the RFC-2833 approach described in the first paragraph, but are supported by pass-through mechanisms of the TN2302, TN2602, G250, G350, G450, G550, and G700 VoIP modules. Interoperability with non-Avaya equipment is supported when signals are encoded in G.711 voice mode, with all proprietary mechanisms set to OFF on the system administrator's "ip-codec set" form. (NOTE: 50 baud Baudot TTY encoding, using RFC-2833, is *not* supported by the Avaya TN2303AP media processor, hardware version 3. The RFC-2833 mechanism in this device supports only the US standard 45.45 baud TTY protocol.)
1194.23(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.	The auto-attendant functionality of Avaya Communication Manager 5.1 conforms to this requirement. There is no inherent IVR functionality. Voicemail functionality for Avaya Communication Manager 5.1 systems may be provided via stand-alone fully conformant platforms, such as Avaya Modular Messaging or Intuity AUDIX LX. Rather than use a separate stand-alone messaging platform, smaller Avaya Communication Manager 5.1 systems, such the S8300 and S8400, are often configured with an onboard Intuity AUDIX IA-770 messaging server. The IA-770 configuration conforms to this requirement, with exceptions.	The Avaya Communication Manager 5.1 / Intuity AUDIX IA-770 configuration provides a fully featured TTY user interface that was winner of the Access Innovation Award from the Association of Access Engineering Specialists. NOTE: If the transmissions between the Communication Manager and the TTY user are via an IP link, the IA-770 configuration's conformance with this requirement is not assured if the TTY signals are not encoded and transmitted using ITU-T Recommendation G.711 or if the link is experiencing packet loss greater than 0.12%.
1194.23(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.	Avaya Communication Manager 5.1 conforms to this requirement.	In most cases, this requirement will apply to the platforms used in conjunction with Avaya Communication Manager, rather than to the Communication Manager itself. One exception is the S8300 and S8400 configuration that includes the Intuity AUDIX IA-770 messaging server. In addition to satisfying this requirement, the IA-770 allows the time-out period to be adjusted by the system administrator.
1194.23(e) Where provided, caller identification and similar	This requirement applies to endpoint devices that are co-located with the	There is no aspect of Avaya Communication Manager that would

telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.	users, such as telephones, TTYs, and PC-based softphones. It does not apply to Avaya Communication Manager.	interfere with the conformance of a properly equipped endpoint device. NOTE: For users who cannot see displays, satisfaction of this requirement, as well as requirement 1194.23(k)(4), can be achieved by using Avaya telephones in conjunction with Avaya "Universal Access Phone Status" software. This software, which is available as a free download from the Avaya web site, utilizes the Communication Manager “shared control” feature.
1194.23(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.	This requirement applies to endpoint devices that are co-located with the users, such as telephones and PC-based softphones. It does not apply to Avaya Communication Manager.	There is no aspect of Avaya Communication Manager that would interfere with the conformance of a properly equipped endpoint device.
1194.23(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.	This requirement applies to endpoint devices that are co-located with the users, such as telephones and PC-based softphones. It does not apply to Avaya Communication Manager.	There is no aspect of Avaya Communication Manager that would interfere with the conformance of a properly equipped endpoint device. NOTE: In addition to the amplitude reset functions that may be available within the individual endpoint devices, Avaya Communication Manager permits system administrators to specify that all Avaya IP telephones connected to system shall automatically reset the volume to the default level after every use.
1194.23(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.	This requirement applies to transducer-equipped devices that are co-located with the users, such as telephone handsets. It does not apply to Avaya Communication Manager.	There is no aspect of Avaya Communication Manager that would interfere with the conformance of a properly equipped endpoint device. All Avaya telephones are equipped with handsets that conform to this requirement.
1194.23(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.	This requirement applies to endpoint devices that are co-located with the users, such as telephones and PC-based softphones. It does not apply to Avaya Communication Manager.	There is no aspect of Avaya Communication Manager that would interfere with the conformance of a properly equipped endpoint device.
1194.23(j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use	Avaya Communication Manager 5.1 conforms to this requirement.	The manner in which Avaya Communication Manager supports the transmission of Baudot TTY signals and other text telephony protocols is described in the response to 1194.23(b). Support for other cross-manufacturer, non-proprietary, industry-standard codes,

encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.		translation protocols, formats or other non-voice information is provided by the “pass-through” mechanism described in the response to 1194.23(b). NOTE: Many VoIP protocols, potentially of value when used in support of assistive technologies, have been proposed as standards but not yet adopted by the majority of manufacturers. Avaya does not certify that these protocols will be supported by Communication Manager.
1194.23(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.	This requirement applies to endpoint devices that are co-located with the users, such as telephones, TTYs, and PC-based softphones. It does not apply to Avaya Communication Manager.	There is no aspect of Avaya Communication Manager that would interfere with the conformance of a properly equipped endpoint device.
1194.23(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.	This requirement applies to endpoint devices that are co-located with the users, such as telephones, TTYs, and PC-based softphones. It does not apply to Avaya Communication Manager.	There is no aspect of Avaya Communication Manager that would interfere with the conformance of a properly equipped endpoint device.
1194.23(k)(3) Products which have mechanically operated controls or keys shall comply with the following: If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.	This requirement applies to endpoint devices that are co-located with the users, such as telephones, TTYs, and PC-based softphones. It does not apply to Avaya Communication Manager.	There is no aspect of Avaya Communication Manager that would interfere with the conformance of a properly equipped endpoint device.
1194.23(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.	This requirement applies to endpoint devices that are co-located with the users, such as telephones, TTYs, and PC-based softphones. It does not apply to Avaya Communication Manager.	There is no aspect of Avaya Communication Manager that would interfere with the conformance of a properly equipped endpoint device. NOTE: For users who cannot see displays, satisfaction of this requirement, as well as requirement 1194.23(e), can be achieved by using Avaya telephones in conjunction with Avaya "Universal Access Phone Status" software. This software, which is available as a free download from the Avaya web site, utilizes the Communication Manager “shared control” feature.

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