

## Wyse Winterm Thin Clients -- Accessibility Information

Voluntary Product Accessibility Template

Winterm 5000 Series Thin Clients

### Winterm 5000 Series Thin Clients -- Linux operating system

#### Section 1194.21 Software Applications and Operating Systems - Det Voluntary Product Accessibility Template

Criteria	Standard	Supporting Features
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 textually.	Supports. People who cannot operate a mouse or other pointing device can run this product. All thin client OS and other local functions such as emulators, browser, and software add-ons are executable from a keyboard. Industry-standard keyboard -- with hotkeys, function keys, numerical keypad, navigation keys -- ensures that all server-based applications designed for a keyboard shall be executable.
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.	Supports. Accessibility features of operating systems used in Wyse thin clients are designed to not be disabled or disrupted by applications which can operate in a multi-user server-based environment.
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.	Supports -- Thin client operating systems provide well-defined focus of current, active elements of their programs, which shifts with changes in focus. Assistive technology must be configured to work in a multi-user, server-based computign environment in order to access shifts in focus.

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.	Supports. Operating systems offer information about the identity, operation and state of user interface elements of the operating system and other local program elements with text. This should be available to any Assistive Technology that has been configured to operate in a multi-user server-based computing environment.
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.	Supports. All operating systems use bitmap images consistently to identify and present controls, status indicators, and other programmatic elements of the local operating system and applications, as well as applications designed to run in a multi-user server-based environment.
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.	Supports. Operating systems used on thin clients provide textual information about themselves, including text content, text input caret location, and text attributes.
1194.21 (g)	Applications shall not override user selected contrast and color selections and other individual display attributes	Supports. Wyse terminals permit customization of display contrast and color features. User-selected contrast and color settings, and other display attributes set in thin client operating systems cannot be
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.	Supports. Thin clients operating systems and local applications provide textual alternatives when animation is employed in them, and support non-animated presentation modes for software applications that deliver it and are configured to operate in a multi-user server-based computing environment.
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.	Supports. Operating systems and other local functions use text and shape simultaneously with color to convey information, indicate actions, prompt responses, or distinguish vertical elements, and support any application that does the same, if the application is designed to run

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.	Supports. Operating systems permits user or administrator to use a variety of color selections and a range of contrast levels to achieve individual preferences for the operating system and local applications, and supports any application that is designed to run in a server-based computing environment.
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.	Supports. Thin client operating systems avoid blinking text or objects having a frequency rate greater than 2Hz or less than 55Hz.
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.	All required aspects of electronic forms -- information, field elements and functionality - may be accessed using Assistive technology so long as the assistive technology can be operated in a multi-user, server-based environment.

**Section 1194.26 Desktop and Portable Computers - Detail  
Voluntary Product Accessibility Template**

<b>Criteria</b>	<b>Standard</b>	<b>Supporting Features</b>
1194.26 (a)	All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).	Supports. See remarks for sections 1194.23 (k.1), (k.2), (k.3), and (k.4) below.
1194.23(k.1)	Controls and keys shall be tactilely discernible without activating the controls or keys	Supports. All Wyse keyboards provide industry-standard key shapes and feel that make them discernible to the user without activating the individual key. This includes raised marks on the "J" and "F" keys on the keyboard, and the "5" key on the numerical touchpad, standard geographic spacing of letter keys, function keys, number keys, and control keys, and different shapes for Tab, Caps Lock, Shift, Control, Backspace, Shift, Insert, +, Enter keys, and bottom level function keys.

1194.23(k.2)	Controls and keys shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2 N) maximum.	Supports. Controls and keys are operable with one hand and do not require any special movement or motor controls to use. Force required to activate these keys and controls is less than 5 pounds.
1194.23(k.3)	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.	Supports. Key repeat rate is fully adjustable by user and/or administrator to 2 seconds per character.
1194.23(k.4)	The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.	Supports. Operating systems support keyboard LED indication for Caps Lock, Numlock, and Scroll Lock. Audio indications for locking and toggle keys, and On/Off are supported by thin client operating systems.
1194.26 (b)	If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).	Supports. Some Wyse thin clients can provide Touchscreen support as an option; this can be implemented in parallel with standard keyboard/mouse input with the functionality described in 1194.23 (k.1-4).
1194.26 (c)	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.	Supports. Wyse thin clients support biometric forms of user access or control in the Windows 3000, 8000 and 9000 series. All these terminals provide alternative forms of identification or activation which do not require the user to possess particular biological characteristics. These are user ID/password, and Smart Card access.
1194.26 (d)	Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards.	Supports. All ports and connectors on Wyse thin clients -- serial, parallel, and USB ports, audio input and output connectors, PC/MCIA slots, network and video ports -- comply with current industry standards.

**Section 1194.31 Functional Performance Criteria - Detail  
Voluntary Product Accessibility Template**

<b>Criteria</b>	<b>Standard</b>	<b>Supporting Features</b>
1194.31 (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. Wyse thin clients are "Assistive-technology ready." They contain the necessary Input and Output hardware connections -- including audio -- to support Assistive Technology that has been crafted to operate in a multi-user server-based computing environment.

1194.31 (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. Wyse thin clients are "Assistive-technology ready." They contain the necessary Input and Output hardware connections -- including audio --to support Assistive Technology that has been crafted to operate in a multi-user server-based computing environment.
1194.31 (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. Wyse thin clients are fully operable without the need for user hearing. Any auditory signals available in the operating systems can also be prevented with visual alerts. These thin clients also support all visual alert features of any applications designed to perform in a multi-user, server-based computing environment.
1194.31 (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. All Wyse thin clients are "Audio ready", and have jacks for microphone input and headphone/speaker output. Delivery of the necessary audio is a function of the design of the application software and server operating system, which must support provision of audio input/output in a multi-user server-based computing
1194.31 (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. All modes of operation of Wyse thin clients do not require user speech.
1194.31 (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. Wyse thin clients require only the motor control required to operate an industry-standard keyboard or mouse, plus the additional accessibility support outlined in Sections 1194.23 (k.1-4), listed above. They also support scanners, bar code readers, and other forms of digital data entry.

**Section 1194.41 Information, Documentation and Support -- Detailed  
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<b>Criteria</b>	<b>Standard</b>	<b>Supporting Features</b>
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1194.41 (a)	Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports. Product documentation is available in html or pdf format on <a href="http://www.wyse.com">www.wyse.com</a> . It is also available in soft copy in standard formats for access by screen readers or Braille embossers.
1194.41 (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 information is available at <a href="http://www.wyse.com/accessibility">www.wyse.com/accessibility</a> in several formats, including MS Office and HTML. Other formats are available through request made to Product support at 1-800-GETWYSE, Option 2.
1194.41 (c)	Support services for products shall accommodate the communication needs of end-users with disabilities.	Wyse offers support through teletype and email, as well as by telephone.

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<b>Remarks</b>
Thin clients operate in a multi-user server-based environment, which requires that each application used must operate in this mode. It should be determined in pilot or evaluation phase that all requirements of a production environment can be met through server-based computing.
It must determined in pilot or evaluation stage that the Assistive technology in question has the driver and other software support available to operate in a multi-user, server-based computing environment. Not all such technology will be available across all thin client operating systems provided by Wyse.

Note: NetX says the Terminal Services Client does not programmatically expose its elements.

So long as software applications are server-based and designed to provide text-based equivalents to proprietary, and unique graphics scheme, these elements should be accessible through a thin client. Recommend complete test of this feature in pilot or evaluation phase.

Need to establish if the relevant drivers are available for deploying selected Assistive technology during evaluation or pilot stage.

<b>Remarks</b>
A key advantage of thin clients is the capability the network administrator has to set up, monitor, and change all individual use settings for the end-user, remotely and seamlessly, relieving the end user of the need to set these functions if desired, and also permitting standard end-user use profiles to be immediately available at any workstation the end-user may have to access without having to reconfigure each device.


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<b>Remarks</b>
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In each instance of potential use, it must determined in pilot or evaluation stage that the Assistive technology in question has the driver and other software support available to operate in a multi-user, server-based computing environment. Not all such technology will be available across all thin client operating systems provided by Wyse.
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Accessibility of software used with the Thin Client will depend on the operating system and protocols of the attached server(s). Most assistive technologies are not designed for use on remote systems. Users should check to determine whether their server-based thin client applications support the accessibility standards.

It should be determined, in pilot or evaluation phase, that it can be delivered in a server-based computing environment, and through the thin client operating system of choice.

Not all input devices are instantaneously functional in a multi-user server-based computing environment. It is advisable to determine functionality of chosen input devices in pilot or evaluation phase of a project.

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**Remarks**

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