



Android Client

Installation and Support Guide



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1 Installation

StayLinked is a three part solution consisting of a Server process, Administrator management console and a Client such as StayLinked for Android. The clients have local configuration options, but cannot provide telnet access without connecting to a StayLinked Server.

The StayLinked Client for Android can be manually installed by running the apk file from the device. This apk file is available for download from the StayLinked downloads site. In order to install/expand the android package, the device must be configured to allow software from unknown sources.

Availability is also available through the Android Play Store.

In some of the previous versions of Android Operating systems, security settings may require updating to allow installation of non-Market apps. From the device setting, typically found as a gear icon, select the security section and check the checkbox to allow software to be installed without going through the Android Play Store. This option can be disabled after the client has been installed.

Once installed, the client can be started using the icon with the StayLinked logo from the Apps menu.

To change the configuration of the client, use the default client password of either:

and **or** **esp**



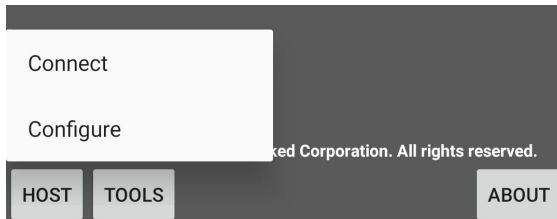
1.1 Setup and Configuration

Once the client starts, you will have the options to select Host, Tools or About. The Host menu provides configuration screens and connection options. The Tools menu consists of diagnostics options. The About menu provides links to get more information about StayLinked. This guide provides some details about using this particular client. A detailed description of the available options can be found in the StayLinked Client User Guide.

The first time the client is run, it must be configured with the host address. This should be the network address of the StayLinked Server process.

The Connect option starts a connection with the StayLinked Server. The option to configure will provide another menu to configure the Server, Display or Miscellaneous client options.

The Host menu should appear like so:



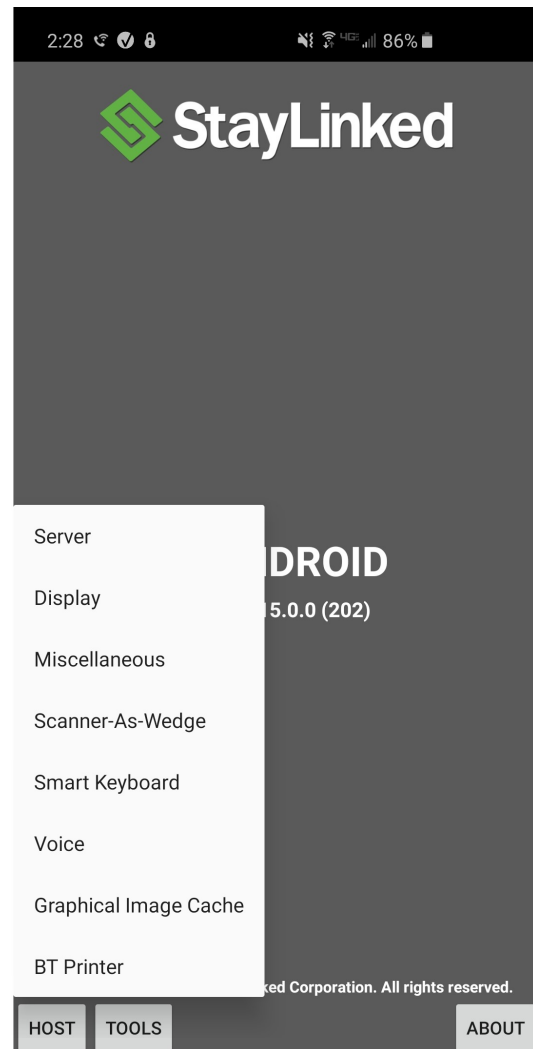
The two default passwords that will work are **esp** or **and**. The default StayLinked Client password can be changed to something new using a Client Setting from the StayLinked Administrator's section of Client Settings. More details on Client Settings can be found in the StayLinked Administrator User's Guide.

1.1.1 Distributing Configurations

StayLinked clients store standard configuration information in the configuration file `staylink.ini`. This file can be found in the default installation location:

**Internal
Storage\Android\data\com.staylinked
.AndroidClient\staylink.ini**

Some installations will default to a 'sandbox' location that is a hidden Android directory. You can configure the StayLinked client to use the path above by allowing the SmartTE client Storage permissions in the Android OS. This is found under Android Settings > Apps > SmartTE > Permissions > Storage.



Please note that all configuration options for the StayLinked clients can be configured using the Client Settings features in the StayLinked Administrator as long as the Client is able to communicate with your StayLinked Server. Please review the Client Settings section of the Administrator User's Guide for additional details.

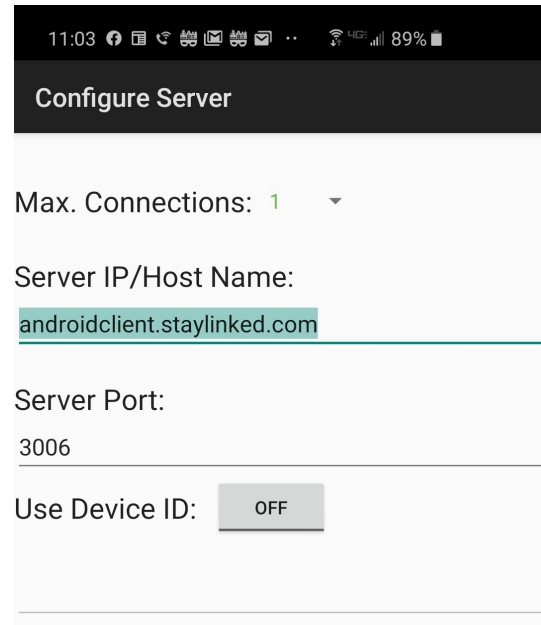
Connecting to your StayLinked Server is the most critical step when using StayLinked Clients. The Server address and connection options start with the Configure > Host dialogue. The typical options are:

Max Connections can be set above 1 for devices that will connect to a server with multi-session licensing.

Server IP/Host Name should be configured with the address of the StayLinked Server process. The Server and Client must have valid network routes and unrestricted communication access in order to exchange transactions. Full details of the required ports and protocols are available in the Secure Communications Guide on the StayLinked downloads site.

Server Port is defaulted to 3006 and should only be adjusted in the rare circumstance that your server does not use the default connection port.

Device ID is configurable for Device Groups that are configured with the [deviceid] variable for custom workstation IDs. More information on device naming can be found in the Device Naming Technical Reference document on the StayLinked downloads site.



11:03

Configure Server

Max. Connections: 1

Server IP/Host Name:
androidclient.staylinked.com

Server Port:
3006

Use Device ID: OFF

The following options are available on the Display configuration tab (right):

Use Bold Font will force all characters into a high-intensity display. Disabling this options will result in narrower characters and allow more characters to be displayed on the screen at any given time.

Fixed Rows and Columns are available to set the dimensions of the display space.

Terminal emulation screens are typically 24 rows by 80 columns. Some emulation specifications can be larger, but most devices cannot clearly display that much text on a usable screen. The portion displayed by the client is called the viewport.

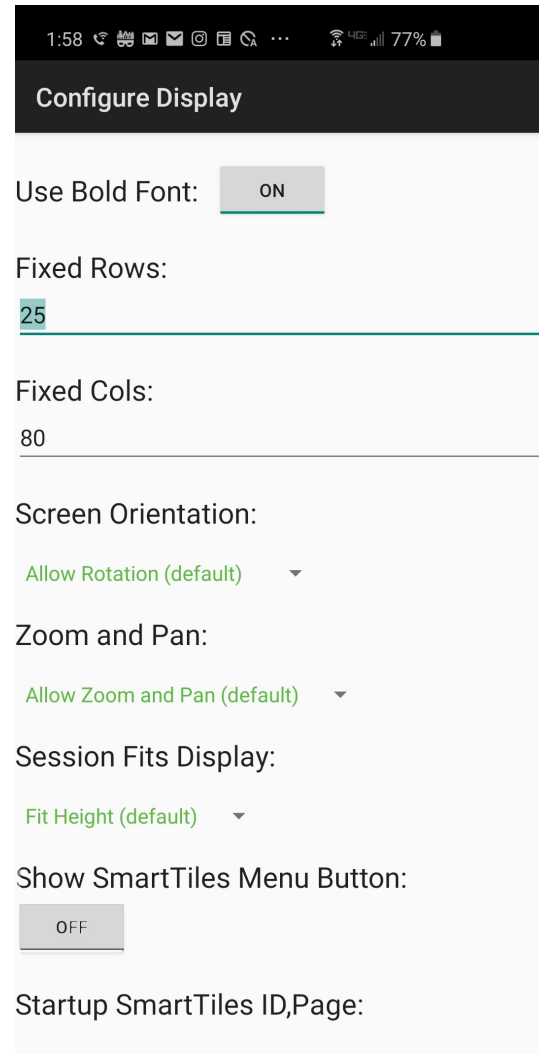
Multi-touch devices should be configured to use the entire emulation space. With these clients, you are able to pan and zoom across the entire emulation space (optional). Reducing the row and column will prevent users from accessing this area on your devices.

Screen Orientation selects the rotation options, allowing or restricting the user from turning the device to switch between portrait and landscape views.

Zoom and Pan allows the user to dynamically grow and shrink the display size and shift the display left to right and up or down to see different sections of the display space.

Session Fits Display sets the default zoom size to fit the height or width of the display space to the screen size.

Show SmartTiles Menu Button enables the StayLinked SmartTiles custom on-screen buttons for various tasks that are independent of the emulation screen. SmartTiles are primarily used to create custom keyboards. Configuration and set up details are available in the Administrator User's Guide in our documentation portal.



1:58 77%

Configure Display

Use Bold Font: ☒ ON

Fixed Rows: 25

Fixed Cols: 80

Screen Orientation: Allow Rotation (default) ▾

Zoom and Pan: Allow Zoom and Pan (default) ▾

Session Fits Display: Fit Height (default) ▾

Show SmartTiles Menu Button: ☐ OFF

Startup SmartTiles ID,Page:

The Miscellaneous settings are typical of any StayLinked client.

Auto Connect will default to never, which requires the user to manually connect to the server to start a session. Setting the value to once will automatically start a connection when the client is started. Using a setting of always will start a new session any time the user ends the current session. This will also disable the client ability to disconnect from an active session. StayLinked recommends a setting of never or once on devices that perform functions other than terminal emulation. Sessions started using the 'always' connection option can still be disconnected from the StayLinked Administrator's Connections List.

Full Screen configures the Client to remove operating system dialogue bars whenever possible. This option is disabled by default, and should not be used when third-party programs are being used to secure your devices.

Show MenuBar will allow you toggle the Host, Tools, and About Menu on and off.

Extended Keys will allow the client to display a 'ribbon' along the base of the screen. This ribbon slides left and right, and displays many common commands. The ribbon can be customized by creating an extkeys.ini file with your desired options. This file and the configuration options are described in section 2 of this guide.

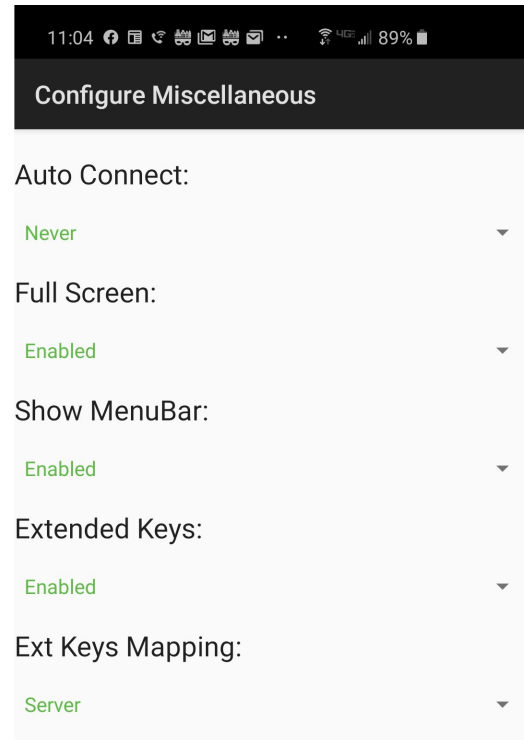
Extended Keys Mapping changes the processing of extended keys options from the Client to StayLinked Server. **This option has no effect if you create a custom 'extkeys.ini' to make your own custom extended keys toolbar.**

Local – The client sends 'mnemonics' to the server, [pf3] if you press the F3 toolbar button, [enter] if you press the Enter toolbar button, etc.

Server – The client sends the appropriate keycode as if you pressed a button on the keyboard. Since these items generate keyboard event codes, the keyboard map on the server is used to determine what action to take for each toolbar button.

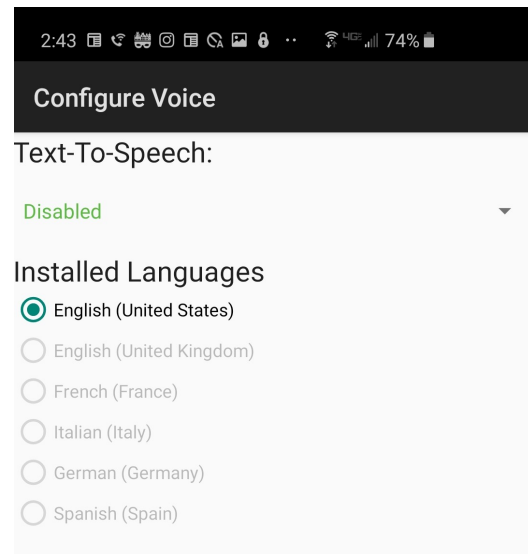
The 'Extended Keys Mapping' option controls only the behavior of the 'built-in' toolbar button ribbons, All, Input, Cursor and FKeys.

More details regarding the extended keys configuration and options can be found in the extended keys section later in the document or in the general Client User Guide found in the documentation section of the StayLinked downloads site.



Voice and Text to speech will allow the client provide voice feedback when licensed by the StayLinked Server. Speech products may incur an additional cost.

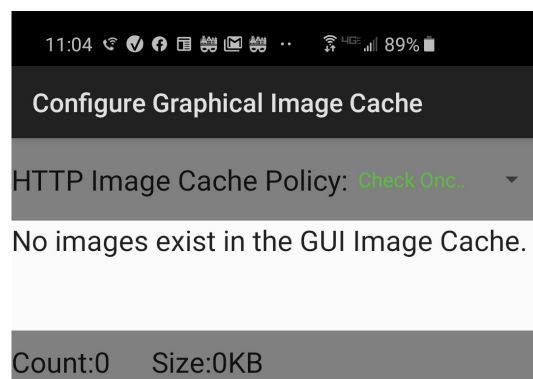
Please contact your StayLinked reseller for details.



to

GUI Image Cache provides a list of images that have been replicated to your Client device for display speed. Graphical telnet mode requires additional Server configuration options to map these image files to display elements.

More information on GUI telnet mode can be found in the StayLinked Administrator User's Guide.



Bluetooth Printing is able to switch printers while in session on the Android client under the Host menu. Configuration details are available in the Client Guide.

Supported Gestures

Keyboards also support the operating system swipe gesture to switch between keyboards. This gesture is supported by the device operating system and hardware, so tuning and control would be accomplished in the device operating system.

A single long press or press and hold will hide the StayLinked menu bar that displays File, Host and About.

A two-finger tap will show and hide the keyboard.

Smart Keyboard options include the following:

Keyboard Transparency: SmartTE keyboards support alpha levels. This sets how transparent the keyboard is, which can allow the user to see the screen through the keyboard.

Off – Disables transparency allowing the keyboard to block the emulation screen behind it. This is an alpha level of 100.

Low – Low transparency is a slightly transparent keyboard. This is an alpha level 80.

Medium – Medium transparency is the mid-level transparent keyboard. This is an alpha level of 60.

High – High transparency shows more of the emulation space than the keyboard. This is an alpha level of 40.

Fade While Pressed: This option will dim the keyboard if pressed and held. The keyboard will return to the normal transparency when released.

Keyboard Pan Cursor: This option will shift the display if the cursor is behind the on-screen keyboard. Disabling this option will leave the cursor behind the keyboard, which would still be visible if the keyboard is at least partially transparent.

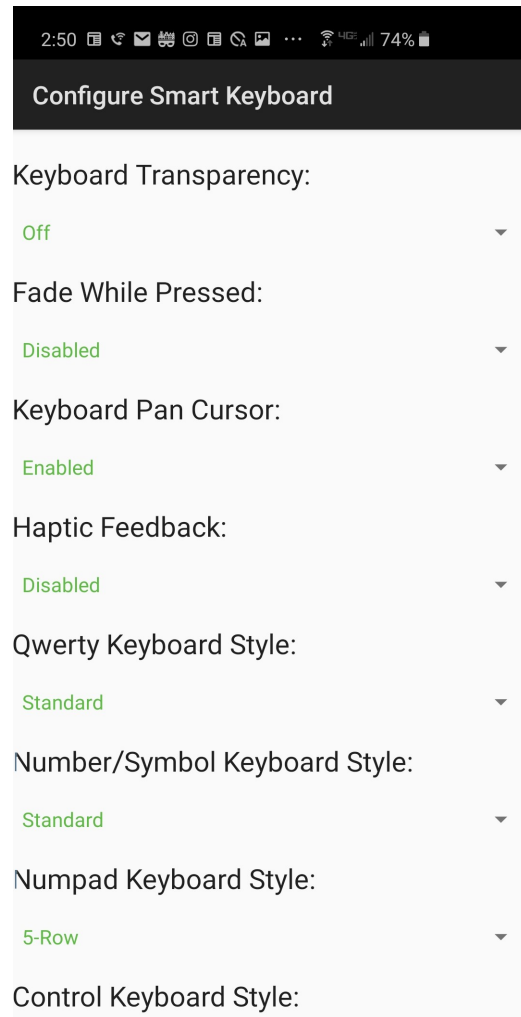
Haptic Feedback: Not all devices support vibration options. If supported, the device will slightly vibrate for each keypress to help users know when a key has been entered.

QWERTY Keyboard Style: Select the default QWERTY keyboard style between the options: Standard, Small, AZERTY, Full Screen, 4-Column Right, 4-Row Full, and 4-Column full.

Number/Symbol Keyboard Style: Select the default Number/Symbol style between Standard and Azerty keyboard layouts.

Numpad Keyboard Style: Select the default Number Pad keyboard style between the options: Full Screen, 2-Row, 3-Row, 2-Column Right, 5-Row and 3-Column Right.

Control Keyboard Style: Select the Control keyboard style between the options: Standard, Warehouse 1 FKeys (1), or Disabled.

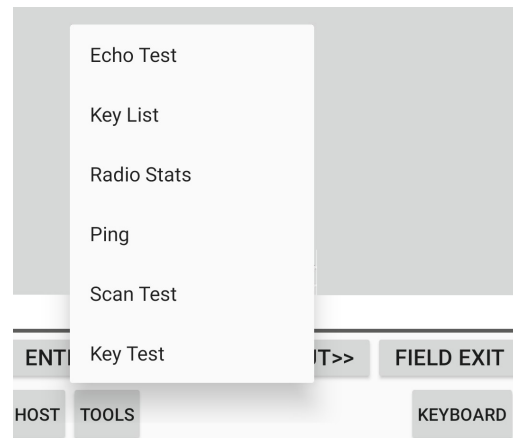


of

The Tools Menu consists of dynamic options that expand when actively connected to your StayLinked Server. Without this connection, the Echo Test and Key List are not available to the Client. Once connected, the following options are available:

Echo Test performs 200 transactions between the StayLinked Client and Server. These are summarized at the end of the test and help measure the connection speed. *This option is only available while the client is connected to the StayLinked Server.*

Key List brings up a menu of the possible mnemonics. This can allow the user to access values that are not easily available or have not been mapped to the keyboard. This option is only available while the client is connected to the StayLinked Server.



Radio Stats will display the current network connection details. This does not provide configuration, but may help identify the device in the Administrator's Connections List.

Ping will allow you to test your network connection with ICMP. Devices that are unable to ping the server will most likely be unable to connect. Since ICMP is a different network protocol, it may give different results if the protocols are handled differently by your network.

Scan Test will operate the device camera, capture any recognized barcode, and submit it to the StayLinked client. The details are returned in the test to confirm what was identified by the scan engine.

Key Test will return the key code for the input provided. Key codes are used by the keyboard map to identify transactions, and will perform the mnemonic that matches the keyboard map entry.

1.2 Scanner Configuration

Devices with an integrated scanner will typically work automatically, supporting the scanner test and reporting a barcode symbology.

Devices that attach an external or Bluetooth scanner may require additional configuration.

Scan devices operating in HID mode will require standard scanner-as-wedge configuration as described in our scanner-as-wedge technical reference document. These clients also support the 'autowedge' feature when configured with a scan delimiter of 0. Devices operating in SPP mode can be natively operated by the StayLinked Client, but require that the scan device is paired with the Android device before it can be selected from the StayLinked Client scanner configuration screen.

Both scanner-as-wedge and Bluetooth mode are displayed as options below. Bluetooth mode will offer a selection of all Bluetooth devices, and often include an icon that suggests the type of paired device.

Scanner-as-wedge requires a scan delimiter or 'autowedge' configuration, the watches keyboard input for the delimiter and translates scans accordingly. Without the code id, barcodes will report their symbology as unknown/unsupported.

The screenshot shows the 'Configure Scanner' screen with the title 'Scanner-As-Wedge'. It includes four dropdown menus: 'Wedge Mode' set to 'Off', 'Scanner Type' set to 'Symbol', 'Transmit Code ID' set to 'Off', and 'Delimiter' set to '^'. A 'FINISHED' button is at the bottom.

The screenshot shows the 'Configure Scanner' screen. It displays two green status messages: 'A camera is detected on this device.' and 'Bluetooth is detected on this device.' Below these is the instruction 'Press the Camera button to scan a barcode.' and two buttons: 'CONFIGURE SCANNER-AS-WEDGE' and 'CONFIGURE BLUETOOTH SCANNER'.

The screenshot shows the 'Configure Scanner' screen with the title 'Bluetooth Scanner'. It includes three dropdown menus: 'Bluetooth Mode' set to 'Disabled', 'Paired Devices' showing 'Name=LEXUS RX MAC=74:D7:CA:CF:75:44', and 'Scanner Type' set to 'Symbol'. The 'Transmit Code ID' dropdown is also visible, set to 'Off'. A 'FINISHED' button is at the bottom.

1.3 Smart Keyboard

StayLinked clients version 14.3 and newer support a range of new keyboards and transparency options. The keyboards can be called using the [keyboard_xxxxxx] mnemonics described in the extended keys section, or executed from the server using keyboard mapping or screen recognition.

Gestures

A single long press or press and hold will hide the StayLinked menu bar that displays File, Host and About.

A two-finger tap will show and hide the keyboard.

A single finger swipe across the keyboard will slide to the next or last keyboard.

Smart Keyboard options include the following:

Keyboard Transparency: SmartTE keyboards support alpha levels. This sets how transparent the keyboard is, which can allow the user to see the screen through the keyboard.

Off – Disables transparency allowing the keyboard to block the emulation screen behind it. This is an alpha level of 100.

Low – Low transparency is a slightly transparent keyboard. This is an alpha level of 80.

Medium – Medium transparency is the mid-level transparent keyboard. This is an alpha level of 60.

High – High transparency shows more of the emulation space than the keyboard. This is an alpha level of 40.

Fade While Pressed: This option will dim the keyboard if pressed and held. The keyboard will return to the normal transparency when released.

Keyboard Pan Cursor: This option will shift the display if the cursor is behind the on-screen keyboard. Disabling this option will leave the cursor behind the keyboard, which would still be visible if the keyboard is at least partially transparent.

Haptic Feedback: Not all devices support vibration options. If supported, the device will slightly vibrate for each keypress to help users know when a key has been entered.

QWERTY Keyboard Style: Select the default QWERTY keyboard style between the options; Disabled, Standard, Small, AZERTY, Full Screen, 4-Column Right, 4-Row Full, and 4-Column full.

Number/Symbol Keyboard Style: Select the default Number/Symbol style between Standard and Azerty keyboard layouts.

Numpad Keyboard Style: Select the default Number Pad keyboard style between the options; Disabled, Full Screen, 2-Row, 3-Row, 2-Column Right, 5-Row and 3-Column Right. In addition to the Smart Keyboard options list above, the following standard options are available on most SmartTE devices.

1.4 Keyboard Mapping

When a client attempts to connect to the StayLinked server it will check for a keyboard map. You can add a keyboard using the StayLinked Administrator. Navigate to the emulation settings section and select keyboard maps. Then right click in the list of keyboards and select add.

The SLANDROID device type can be found in the StayLinked Generic keyboard group. If it does not appear in your list of keyboard choices, you can create a keyboard from scratch or update your list of official published keyboards. The “Administrator Keyboard Definition Update” from the Administrator Downloads section of our portal site will update your StayLinked Administrator with the most current list of known devices available.

Once the keyboard map is opened, select File and Save Changes to add it to your server’s list of installed keyboards. Additional information on keyboard maps and their use can be found in the Technical Reference on the subject in the Documentation section of our portal site.

If your device displays the error message “eSP0003 No VT Keyboard Map Found”, you have not added the keyboard map that matches your device type and emulation. This message will show one of the three main device types of VT, 5250 or 3270, based on the emulation type specified in your telnet host entry.

This Client provides several different on-screen keyboards for emulation use. These generate keyboard event codes in the same manner as other StayLinked Clients. More information on keyboard maps can be found in the Keyboard Map Technical Reference document on the StayLinked downloads site.

Alpha QWERTY



Function Keys



Numeric



1.5 SmartMenu

Devices connecting to a SmartTE Server that displays a screen with more than one smart menu objects will automatically generate a client menu option called SmartMenu. This will provide a OS style pop-up menu of all of the menu objects that are tap-able on the current screen.

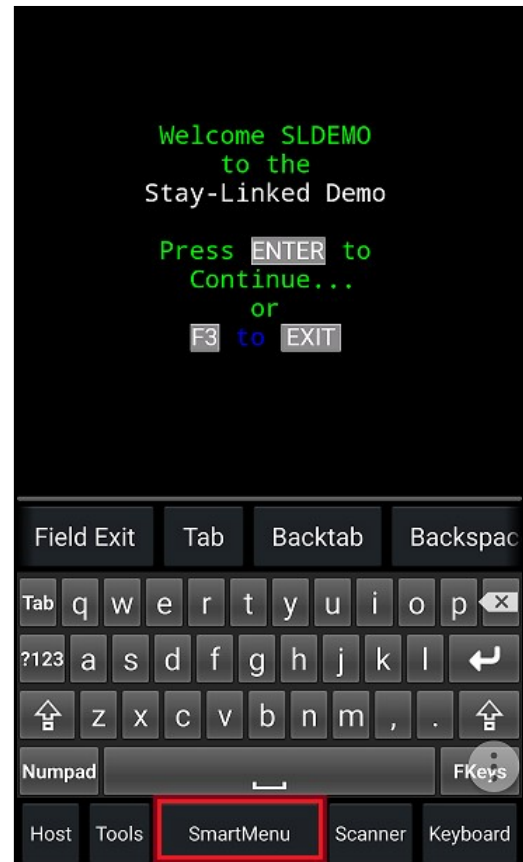
This feature requires StayLinked Server version 14.0 or higher and smart menu object configurations.

1.6 SmartTiles

Devices connecting to a v14.4 or newer StayLinked Server have the option to display SmartTiles. These tiles overlay the emulation space with customizable buttons or keyboards. Each tile set allows for multiple tiles, presented by the StayLinked server based on user inputs or screen recognition features.

SmartTiles include the option to replace the standard Keyboard button on the menu-bar with a SmartTiles button. This is commonly used to create custom keyboards and context sensitive menu options without the need to adjust the emulation screens.'

More information on SmartTiles can be found in the Administrator User's Guide and other references.



2 Extended Keys

For added touch screen functionality we have created a toolbar that will show at the bottom of the device screen. This toolbar serves as additional area for activating pre-define functions.

The file that controls the functions and labels of the toolbar is named **extkeys.ini**. The contents of this file (a simple ASCII format) simply list the button number, the text to be displayed on the button and the mnemonic to be issued when the button is used.

In this example, replace statements within the < > with the appropriate information.

Button<#> = <Button Text> , <mnemonic>

By example: button1=Tab,[tab]

This would cause the first button to be labeled “Tab” and perform the [Tab] function (which moves the cursor position to the next field) each time it is activated.

The following is a sample layout of the extkeys.ini file. This file must be in a true txt file format. Any formatting information in the file will prevent it from being used by the client software. Any errors found on a line of the file will cause the line to be ignored.

```
[display]
font_size=8
[defaults]
button1=Tab,[tab]
button2=F Exit,[fldext]
button3=Enter,[enter]
button4=F1,[key=990100]
button5=F2,[key=990200]
button6=F3,[key=990300]
button7=F4,[key=990400]
button8=F5,[key=990500]
button9=F6,[key=990600]
button10=EXIT,[device-exit]
button11=HOME,[home]
button12=PgUP,[device-pageup]
button13=PgDN,[device-pagedown]
button14=KbMnu,[keyboard menu]
```

Please note that all mnemonics (the text in square brackets) should be lower case characters only.

The font_size option in this file will control the size of the characters used to describe each button. On small devices it is recommended that no more than 3 characters are used and on vehicle mounts or full screen devices no more than 5 characters. If more characters are used the software will center the text on the button and could cut off the edges on large fonts or long descriptions.

2.1 Map-able Mnemonic options

Each button on the toolbar may be configured to perform one of the following actions:

Cursor Positioning	Paging Support	Function Keys	Custom Options
[backspace]	[device-up]	[pf1]	[call1]
[tab]	[device-down]	[pf2]	[call2]
[clear]	[device-left]	[pf3]	[call3]
[down]	[device-right]	[pf4]	[device-exit]
[left]	[device-pageup]	[pf5]	[keyboard menu]
[right]	[device-pagedown]	[pf6]	[staylinked menu]
[up]	[device-pageleft]	[pf7]	[toggle_sip]
[delete]	[device-pageright]	[pf8]	[switch_session]
[enter]	[device-fullup]	[pf9]	[disconnect_device]
[eof]	[device-fulldown]	[pf10]	[minimize_client]
[fldext]	[device-fullleft]	[pf11]	[execute_program]
[home]	[device-fullright]	[pf12]	[increase_font]
[insert]	[device-followcursor]	[pf13]	[decrease_font]
[pageup]		[pf14]	[renegotiate]
[pagedn]		[pf15]	[soft_trigger]
[printhost]		[pf16]	[key=xxxxxx]
[reset]		[pf17]	[keyboard_qwerty]
		[pf18]	[keyboard_numsym]
		[pf19]	[keyboard_numpad]
		[pf20]	[keyboard_fkeys]
		[pf21]	[keyboard_ctrl]
		[pf22]	[keyboard_cycle]
		[pf23]	[tile_show]
		[pf24]	[tile_show #,#]
			[tile_hide]
			[tile_toggle]
			[tile_prev]
			[tile_next]
			[tile_cycle]
			[tile_refresh]
			[disabled]
			[hide]

The number of keys will vary depending on the size of the device display. Typical configurations will have 8 available buttons, with vehicle mounts having a maximum of 14 keys. The default toolbar appears with F11-F24 if the extkeys.ini file is not found. Each button will appear as the default function key if any errors in formatting are found in that line of the extkeys.ini file.

While many of the settings are self explanatory, the following may be helpful in some environments:

[soft_trigger] - Activates the device's scanning laser as though the trigger had been depressed.

[renegotiate] - Toggles the display between the maximum and configured font sizes.

[minimize_client] - Moves the StayLinked client to the background and displays the device desktop.

[device-exit] - Ends the StayLinked session and the telnet session. Always requests confirmation.

[toggle_sip] - Hides or shows the Soft Input Panel, also known as the tappable keyboard.

[disconnect_device] - Disconnects the client from the server but leaves the telnet session active. The device will return to the last state once it is re-connected to the StayLinked server.

[execute_program] - This option must be accompanied by a program call configured in the staylink.ini file.

[key=xxxxxx] - Acts as a keyboard key by generating a code that can be configured in the Administrator keyboard definition for the specific device type.

SmartKeyboard Commands

[keyboard_XXXXX] These various commands will show the keyboard type defined in the mnemonic, or hide that keyboard if it the current keyboard.

SmartTile Commands

[tile_show #,#] - This will take the user directly to a tile collection ID and page, as entered in the number options. For example, [tile_show 4,3] would display page three of tile collection four. [tile_show ,3] - would display page three of the current collection.

[tile_show] would show the current page in the current collection.

[tile_hide] - This removes the current tile from the screen, allowing the user to see the emulation space. Once hidden, the user would need to select an extended keys or keyboard map entry to show a new collection and page.

[tile_toggle] - This is a combination of the hide and show mnemonics which will hide the tile if it is currently displayed, or show it if it was currently hidden.

[tile_prev] - Displays the previous page in the current SmartTile collection. Using this mnemonic on the first page will wrap back to the last page of the current collection.

[tile_next] - Displays the next page in the current SmartTile collection. Using this mnemonic on the last page will wrap back to the first page of the current collection.

[tile_cycle] - This mnemonic works much like the next option, except that it includes a blank or hide option after the last page of the collection.

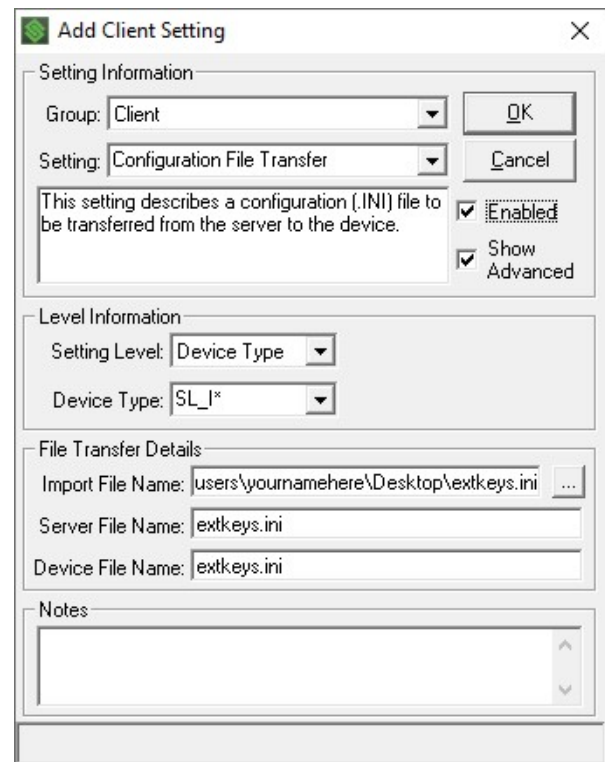
[tile_refresh] - Used primarily during initial testing and design, this mnemonic will request the latest copy of the collection page from the StayLinked server. This allows you to immediately see any changes on the collection page on your device without having to change pages or reconnect.

2.2 Distributing toolbar configurations

Toolbar configurations can be standardized by creating a client setting that distributes the extkeys.ini file. This is done in the StayLinked Administrator and will be pushed to qualified devices when a new session is started. The sample dialogue on right can be found by creating a new setting in the Administrator's Client Settings section. Details on this and other features of the Administrator can be found in the Administrator User's Guide in the Documentation section of our downloads site.

To copy the configuration of the toolbar from one device to another, simply copy the desired extkeys.ini file into the StayLinked directory of the destination computer. This is easily completed if you start a StayLinked session and use the reliable file transfer to copy the file to the desired devices. Please note that the client software will store your settings file in persistent space if you transfer the file from the StayLinked Administrator.

If changes are made to this file they will not take effect until the StayLinked device software is restarted, which can also easily be done from the StayLinked Administrator.



3 *Contact Information*

For further information or technical assistance, please contact your StayLinked Certified Partner or our technical support team.



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Suite 160
Irvine, CA 92618

714.918.7700

<http://www.StayLinked.com/>