



## HGS UTS Configuration Administrator Help



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## Configuration

### HGS UTS Configuration Administrator

The **HGS UTS Configuration Administrator** dialog contains configuration controls to maintain the appearance and functionality of the HGS Client environment

#### Basic Terminal Settings

The controls in this group affect the general behavior of the terminal.

##### Initial Transmit Type

UTS emulation provides three modes of transferring data from the terminal screen to the host processor: **VAR** (Variable), **ALL**, and **CHAN** (Changed). The current transmission mode is set in the XMIT() field in the terminal control page. Most host programs expect the terminal to be operated in the VAR transmit mode. If your application requires an initial mode other than VAR, set it here and HGS Client will initialize the XMIT() field with that value.

##### Screen Options

The controls on this tab govern general screen appearance.

##### Force UPPERCASE

Checking this box causes HGS Client to translate lower case characters that are typed to their uppercase equivalents.

##### Blinking Cursor

Checking this box causes the current cursor position to blink. If this box is not checked the cursor remains solid.

##### Text-only Blink

Check this box to blink only the text of the UTS blinking character instead of the text and background.

##### Mapper Look

Check this box to set HGS Client for "Mapper Look and Feel" processing. With **Mapper Look** checked, four of the display characteristics of HGS Client change:

1. If a line contains an ASCII Tab Code in the first column, that line is considered a "Tab Line". Tab codes are displayed using the graphic vertical bar (|) that produces a visual column separator for your report.
2. The only control characters displayed will be the Start-of-Entry (SOE), the standard Tab Code, and the Mapper Tab Code. Characters such as Form-Feed and Line-Feed are displayed as spaces.
3. A protected field (function key name on the last row of the Mapper screen) can be transmitted by clicking with the mouse. This is compatible with the function key lines produced by Mapper 2200 level 35 and higher.
4. HGS Client will also support special Mapper box drawing sequences sent from the host.

Note: When Mapper Look is used, the Mapper station must be configured as a terminal type "PCE" with an option of "S" (Mapper Look and Feel), or as a terminal type of "6S".

##### Print Time-out

Use this text box to specify how long the emulator will wait for additional print data before automatically closing the printer. The default is 15 seconds.

-1 (or any negative value) = No timeout,

0 = Timeout immediately after printing,

*n* (any positive number) = Timeout *n* seconds after printing.

**Screen Pages**

In this text box, you may specify from one (default) to nine screen pages for each UTS screen. In conjunction with the paging feature, the PAGE DOWN and PAGE UP UTS keys are mapped to the Page Down and Page Up keyboard keys, respectively.

Paging is most useful where only one screen is available. Paging provides the means to maintain multiple output screen pages for reference while running additional transactions.

**WARNING:** The host is completely unaware of the paging feature. Applications, especially DPS, often check the screen input for exact text — meaning the application expects specific text to appear at specific locations on specific screens. Use of the Page Down and Page Up keys with this feature can leave the screen in a state not expected by the application.

**Columns**

Specify the number of columns that are to be available for each screen session.

**Rows**

Specify the number of rows that are to be available for each screen session.

**Show Maximized**

Check this box to configure the HGS Client to run maximized.

**Configuration Actions**

Use the buttons in this group to configure the individual features of this product.

**Sessions**

Click this button to configure the individual sessions (IP addresses, station names, etc.) that are to be available for emulation.

**Screen Appearance**

Click this button to reveal the controls used to alter the appearance of the screens (see Appearance).

**Keyboard Layout**

Click this button to reveal the controls used to configure keystrokes for special UTS and Windows functions (see Keyboard).

**Printers**

Click this button to reveal the controls used to configure printers (see HGS UTS Printer Configuration).

**Macros**

Click this button to reveal the controls used to configure key macros that perform a series of keystrokes (see Macros).

**Generate Params**

Click this button to generate HGS Client XML code to be included in the client parameter file.

**HGS Session Setup**

The **HGS Session Setup** window allows the configuration of individual sessions to be made available through the generated web parameters. The stations configured represent a pool from which sessions may be initially opened and made visible to the user, or reserved for future \$\$OPEN activity.

**New Session**

Click this button to create a new session name entry. Once created, change its associated values in the View/Edit Selected Session group, below.

**Delete Session**

Click this button to delete the selected Session Name entry.

**Move Up**

Click this button to move the selected Session Name entry up one line.



**Move Down**

Click this button to move the selected Session Name entry down one line.

**Sessions**

This list box contains all configured Session Names, their Destinations, OpenIds, Station Names, etc. Select a session from this list box to configure a change to the session in the View/Edit Selected Session options, below, or to move the session in, or delete the session from, the list.

**View/Edit Selected Session**

Use the controls in this group to configure the attributes of a session entry.

**Session Name (Unique)**

The session name must be unique within the HGS configuration, but its value is only meaningful within this HGS UTS Configuration Administrator program.

**Destination Name**

This text box may contain any name that is meaningful to the person administering HGS connections. Generally, the name refers to Host Gateway Server servicing one or more Unisys Clearpath OS 2200 Mainframes.

**Destination IP Address**

This text box requires the fully qualified domain name (FQDN) or dotted IP address of the Host Gateway Server (HGS).

**Edit IP Address**

Click this button to edit the IP address of the destination. Use the context sensitive help provided for further assistance.

**Dest IP Port**

This text box requires the IP port for your site (normally, 102). For SSL connections through Host Gateway Server (HGS) from KMSYS Worldwide, 3782 is the accepted standard.

**Open Id.**

The open id defines a connection between the station and the destination. The open id name is an Open Id string as configured in the HGS server.

**Station Name**

Station Name is the name of the station that will be passed to SILAS/CMS1100 for the indicated Route. It will default to the Route name when a new Route is defined. It may be changed as desired. This name will show as a terminal name for demand runs. For TIP access, this name must also appear as an EU-NAME on a PID statement in the CPCOMM/CMS1100 configuration.

Note: A station name of "\_HGS" will allow the Host Gateway Server to assign the station name.

**Term Type**

The type should be consistent with the type terminal expected for host processing. If the host program supplies terminal attributes (e.g., screen and text color), choose UTS60. If you are used to being configured as UTS40, choose UTS30.

**HGS Security Flags**

Use these controls to enable authentication and encryption for the session.

**Authenticate**

Check this box to provide Secure Socket layer (SSL) authentication.

**Encrypt**

Check this box to provide encryption between the HGS Server and the Client.

**SITA Open Id**

Check this box only if you are connecting to a SITA Gabriel host.

**SPSO Config.**

This list box will contain the generated XML code resulting from configuring of Single-Point Sign-On options (SPSO). If your site requires SPSO, you should configure these options prior to generating the parameters for the client page with the Generate Params option on the main HGS UTS Client Administrator dialog.

**Configure SPSO...**

Click this button to open the SPSO Authentication Configuration dialog and set the required SPSO Authentication options for your site.

**Clear SPSO Config.**

Click this button to clear the XML string.

**Initial Macro**

From this drop-down list box, you may select a macro to be run upon the initial session connection.

Notes on file placement:

Macros may be created manually by this admin program or with the HGS Client. The HGS Client has an additional feature, a built-in Macro Recorder, which may be useful for recording initial sign-on steps. In all cases, macros are placed in the MACROS.CFG file.

The client stores the MACROS.CFG file in the Application Data directory (normally, C:\Documents and Settings\*your-user-id*\Application Data\KMSys\HGSUTSClient\_4.0\CONFIGURATION\). The admin program expects this file to be in its installation directory (normally, C:\Program Files\KMSYS Worldwide\HGS UTS\4.0\Admin\).

If you use the client to record the initial macro, you will subsequently need to copy the MACROS.CFG file to the installation directory of the admin program before the macro will appear in this list box. Further note that any macros created previously with the admin program will be lost unless manually merged with the ones from the client program.

Notes on macro inclusion:

The macros selected for Initial Macro and Sign-Off Macro **MUST** be selected for the generated XML code to be included in the parameter file for the client page. Check the Macros option on the Selections tab of the Generate Web Parameter Text dialog to reveal the Macro Selections inclusion list (click Generate Params from the main HGS UTS Configuration Administrator dialog).

**Sign-Off Macro**

From this drop-down list box, you may select a macro to be run upon session close.

The notes for Initial Macro, above, also apply to the Sign-Off Macro.

**Trace on Start Option**

The options in this group control trace activity that will occur during session start-up and execution.

These options are normally only required for guided testing by KMSYS Worldwide, Inc. support personnel.

**None**

No trace activity will be performed.

**Trace to Window**

Use this selection to initiate the client trace facility for the selected client session. All communications between the client and the host will be displayed in a separate window.

Note: A right mouse click in the trace window will reveal a menu containing three selections that control the trace window: **Stay on Top**, **Copy to Clipboard** and **Clear**. **Stay on Top** controls whether the trace window remains on top (the default) of the emulator window during the trace, or remains in the background. **Copy to Clipboard**

may be used to copy the contents of the trace window to the Windows clipboard for subsequent pasting into another Windows application (e.g., Notepad, WordPad, etc.). **Clear** may be used to clear the contents of the trace window.

**Trace to File**

Use this selection to initiate the client trace facility for the selected client session. This selection is the same as Trace to Window except that the trace information will be written to a user-named file.

**Trace to Both**

Use this selection to initiate the client trace facility for the selected client session. This selection is a combination of the two selections above.

**Open on Start**

Check this box to open the session upon the start of the client. When not checked, a screen tab will be visible for the session but no connection to the host will be attempted. It will be up to the user to open the screen independently.

**No Screen**

Check this box to reserve the open id for use on a \$\$OPEN from any screen. When checked, no screen tab will be created for the session.

**Apply Changes**

Click this button to apply all changes to the selected session.

**OK**

Apply all changes and close the HGS Session Setup window.

**Cancel**

Close the HGS Session Setup window without saving changes.

**eXpress Custom Terminal Screen Appearance**

The **eXpress Custom Terminal Screen Appearance** window contains configuration controls to change screen fonts and to apply colors to specific areas of the display.

**Screen Color Settings**

The **Screen Color Settings** group contains controls that may be used to change the foreground and background color of various UTS screen attributes.

**Select Color for Attribute**

From this group, select an attribute option button whose color is to be changed. When an attribute's colors are changed, those colors will be applied to all areas of the screen having that specific attribute. An attribute's colors consist of a foreground (text) color and a background color.

**Choose Foreground (text) Color**

To change the text color of an attribute, first select the attribute from the **Select Color for Attribute** option group. Next, select a color from this drop-down list box. If you do not wish to use one of the standard Windows colors, select **Custom** at the bottom of the list and configure the desired color with the standard Windows **Color** dialog.

**Choose Background Color**

To change the background color of an attribute, first select the attribute from the **Select Color for Attribute** option group. Next, select a color from this drop-down list box. If you do not wish to use one of the standard Windows colors, select **Custom** at the bottom of the list and configure the desired color with the standard Windows **Color** dialog.

**Edit Palette**

Click this button to edit the screen color palette.

**Use UTS60 Colors**

Check this box to use UTS60 colors as set by the host program. Only valid if the **Terminal Type** selected is UTS60.

**Always Use Low Intensity for UTS60 Background**

For better contrast, check this box to use low intensity color for UTS60 background color.

**Screen Font**

Use the controls in this group to change the screen font, intensity, size and character set.

**Font Name**

From this drop-down list box, choose the desired font.

**Bold**

Click this button toggle to increase or decrease the intensity of the selected font.

**Font Size**

Use this spin box to increase or decrease the size of the selected font.

**Character Set**

Use this drop-down list box to change the character set.

**Automatic Font Scaling**

These three options control how the emulator will behave when you size a station window or change the screen font.

**None**

When the **None** option is set, no screen or font scaling will be performed when the screen window is resized.

**Screen to Font**

The **Screen to Font** option causes the screen window size to be changed automatically when the screen font size is changed. Consequently, the station window size may be changed without altering the size of the font. If the size of the window is made larger than that necessary to accommodate the screen size, a dotted line will show the physical limits of the screen. If the window size is reduced below the physical screen size, scroll bars appear allowing access to those parts of the screen not currently visible.

**Font to Screen**

The **Font to Screen** option causes the font size to change automatically whenever the window size of the station is altered. For example, if a window is enlarged or made smaller, the font will increase or decrease in size, accordingly. The **Font to Screen** option will only work when using a scalable font (e.g., Courier New, Lucida Sans Typewriter, etc.).

**Default**

Use this button to restore the defaults.

**Import**

Click this button to import an existing appearance settings file.

**Export**

Click this button to export the appearance settings to a file.

**Edit Screen Color Palette**

This dialog allows the editing of the supplied standard 16 colors. To edit, select a color in the **Color Palette** list and click the **Edit Selected** button. You may also double click a color in the list.

**Color Palette**

Select a color from this list and click the **Edit Selected** button.

### Set to Default

Click this button to reset to all the default colors.

### eXpress Custom Keyboard Layouts

This window is used to define which Windows keyboard key or key combination will be used to initiate a UTS terminal or HGS Client emulation specific action. Use this window to customize the keyboard to meet your specific needs.

### Graphic Keyboard

The graphic keyboard display illustrates the configured key or key combination associated with a terminal key. Note: The location and arrangement of the keys on the graphic keyboard may not match the exact layout of your keyboard; however, most keys on your keyboard should have its corresponding key represented on the graphic keyboard. After selecting a key name from the **Key Actions** and **Key Sequence Assignment** list, the configured key or key combinations will appear as if they have been pressed. You may change (redefine) or add additional key combinations by pressing the key(s) on the graphic keyboard with a left mouse click. Valid key combinations are any single key, or a single key plus a combination of one or more of the optional, **Shift**, **Alt** and **Ctrl** keys. When the desired key combinations have been selected, press the **Set Key Assignment** button to assign the key.

Note: Pressing the **Num Lock** key on the *actual* keyboard will cause the **Num Lock** display on the graphic keyboard to toggle (ON/OFF) and the captions on the faces of the numeric keypad keys to change accordingly.

The extended keys (see below) are not mapped to any key in the **Key Actions** list for the default keyboard layout file. They may, however, be mapped by the user to any key in the **Key Actions** list. If they are *not* mapped, their behavior will be the same as their counterparts on the numeric keypad and main keyboard.

For enhanced 101- and 102-key keyboards, extended keys are the **Ins**, **Del**, **Home**, **End**, **Page Up**, **Page Down** and arrow keys in the clusters to the left of the numeric keypad; and the divide ( $\backslash$ ) and **Enter** keys in the numeric keypad. The location and arrangement of extended keys may vary from one keyboard to another and may not match the graphic keyboard display.

### Type a Key Sequence

If this button is clicked, a **Type a Key Sequence** window will pop up. In this window, you may type the key sequence you desire to map to the currently selected name in the list box. On your acceptance of the typed key sequence, the key will automatically be mapped.

### Set Key Assignment

This button sets the mapping of the currently selected key to the selected graphic keyboard keys.

### Undefine Key

This button is used to remove the mapping of a key. You may remove a mapped key by first selecting the key in the list box followed by a click of this button.

### Default

This button loads the default keyboard layout as distributed by KMSYS Worldwide, Inc.

### Import

Use this button to import an existing keyboard definition file (.KEY).

### Export

Use this button to save the current keyboard layout to a file.

### Print

Click this button to print a list of all key actions and key action assignments.

### How to Map or Re-Map UTS Terminal or a HGS Client Key

The following describes the procedure for re-mapping UTS terminal or HGS Client keys:

1. Select the key to be re-mapped from the list box shown.

2. There are two methods of defining which key or key combination to map to the selected name in the list box:
  - a. Click the **Type Key Sequence** button, and then type the desired key sequence directly on your keyboard. When you accept the key sequence, the key mapping will automatically be set.
  - b. Select the desired key from the graphic keyboard using a left mouse click over the face of the key. Next, select the desired **Shift**, **Alt** and **Ctrl** keys, if any, by clicking them with the mouse. Finally, to set the keys selected, click the **Set Key Assignment** button.

These steps may be repeated until all desired key mappings are completed.

### Conflicts

If a selected key sequence is already mapped to another key, a message box will appear naming the mapped key. You may then re-map or "undefine" the key in conflict or choose a different key sequence.

If you map a key that already has a key sequence assigned to it, a window will appear allowing you to **Add** an alternate key sequence, **Redefine** (replace) the existing key sequence with the new key sequence or **Cancel** the key assignment operation altogether.

### Add or Redefine Key

The **Add or Redefine Key** window appears when a conflict is discovered while attempting to assign a keystroke or keystroke combination to a keyboard function.

#### Help

Click this button to receive on help for this window.

#### Add

Click this button to add an alternate key sequence. This choice is useful when you want more than one keyboard key to perform the same function (e.g., the two **Enter** keys).

#### Redefine

Redefine or replace the existing key sequence.

#### Cancel

Clicking the **Cancel** button closes this window without assigning the key.

### HGS Macro Manager

This dialog is used to maintain key macros. Key macros may consist of any UTS key function, standard Windows cut/copy/paste, text strings, text strings with user prompts, timed waits and conditional waits for strings. Macros may be created initially within the macro editor or with the macro recorder from any open screen.

### Graphic Keyboard

The graphic keyboard display illustrates the configured key or key combinations assigned to activate a macro. Note: The location and arrangement of the keys on the graphic keyboard may not match the exact layout of your keyboard; however, most keys on your keyboard should have its corresponding key represented on the graphic keyboard. After selecting a macro name from the **Available Macros** list, the configured key or key combinations will appear as if they have been pressed (light gray). You may change (redefine) or add additional key combinations by pressing the key(s) on the graphic keyboard with a left mouse click. Valid key combinations are any single key plus one or more of the optional, **Shift**, **Alt** and **Ctrl** keys. When the desired key combinations have been selected, press the **Set Assignment** button to assign the key.

Note: Pressing the **Num Lock** key on the *actual* keyboard will cause the **Num Lock** display on the graphic keyboard to toggle (ON/OFF) and the captions on the faces of the numeric keypad keys to change accordingly.

For enhanced 101- and 102-key keyboards, extended keys are the **Ins**, **Del**, **Home**, **End**, **Page Up**, **Page Down** and arrow keys in the clusters to the left of the numeric keypad; and the divide (/) and

**Enter** keys in the numeric keypad. The location and arrangement of extended keys may vary from one keyboard to another and may not match the graphic keyboard display.

The extended keys may be mapped to any macro in the **Available Macros** list. If they are *not* mapped, their behavior will be the same as their counterparts on the numeric keypad and main keyboard.

#### **Available Macros**

This list box contains the names of all configured key macros. Each macro can have an activation key(s) assigned by pressing the keys on the graphic keyboard, followed by the **Set Assignment** button, or via the **Type Sequence** button.

#### **New Macro**

Click this button to create a new macro. Hint: You can easily create a new macro by using the macro recorder on the HGS Client emulator window. See the **Start Recorder** selection on the **Macros** menu.

#### **Edit Macro**

After selecting a macro from the **Available Macros** list, click this button to edit or view the macro with the **Edit Macro** dialog.

#### **Delete Macro**

After selecting a macro from the **Available Macros** list, click this button to delete the macro.

#### **Show in Menu**

Use this button to toggle between placing the selected macro on the **Macros** menu and removing it from view.

#### **Type Sequence**

If this button is clicked, a **Type a Key Sequence** window will pop up. In this window, you may type the key sequence you desire to map to the currently selected name in the **Available Macros** list. On your acceptance of the typed key sequence, the key will automatically be mapped.

#### **Set Assignment**

This button sets the mapping of the currently selected **Available Macros** to the selected graphic keyboard keys.

#### **Clear Assignment**

This button is used to remove a key mapping. You may remove a mapped key by first selecting the key in the **Available Macros** list followed by a click of this button.

#### **How to Assign a Macro Activation Key**

The following describes the procedure for assigning macro activation keys:

1. Select the key to be remapped from the **Available Macros** list box.
2. There are two methods of defining which key or key combination to map to the selected name in the **Available Macros** list:
  - a. Click the **Type Sequence** button, then type the desired key sequence directly on your keyboard. When you accept the key sequence, the key mapping will automatically be set.
  - b. Select the desired key from the graphic keyboard using a left mouse click over the face of the key. Next, select the desired **Shift**, **Alt** and **Ctrl** keys, if any, by clicking them with the mouse. Finally, to set the keys selected, click the **Set Assignment** button.

These steps may be repeated until all desired activation keys have been assigned.

#### **Conflicts**

If a selected key sequence is already mapped to another key (macro activation key or terminal function), a message box will appear naming the mapped macro or terminal function. You may then re-map or remove the **Available Macros** in conflict or choose a different key sequence.

## HGS UTS Printer Configuration

The Device Id tabs on the HGS UTS Printer Configuration dialog is used to assign printers to device ids (DIDs). All printer settings are global for all HGS Client Session screens. That is, you cannot configure different printers for each screen.

### Device Id. (DID) tabs

Select the button (1-3) to be associated with the selected printer, below.

### Printer Output Type

The options in this group allow you to choose one of two types of printing.

#### Windows (Windows drivers)

Select this option (the default) to print to a printer using the standard Windows print drivers.

#### Passthru Printing (to Port)

Select this option if the selected printer is to be used for passthrough printing.

#### Local Print Object

Select this option to use a user-developed LPO to receive print data instead of standard HGS Client print handling.

See HGS Local Print Objects for the list of methods that may be referenced in the LPO.

### Windows Printing Settings tab

Use the controls in this group to select a printer and printer attributes.

#### Select Printer

Select a printer from this drop-down list box. This box contains a list of all printers installed through Windows on your PC. If the **Passthru Printing** option is selected, this will be to only selection available on this tab.

#### Printer Font

The controls in this group affect the font used for printing.

##### Font Name

From this drop-down list box, select an installed font for printing.

##### Size

With this spin box, choose the appropriate font size.

##### Bold Face

Check this box if the print font is to be in boldface type.

##### Character Set

From this drop-down list box, select the desired character set.

#### Orientation

The mutually exclusive options in this group specify the page orientation to be used when printing.

##### Portrait

Choose this option to print so that the short edge is the top of the page.

##### Landscape

Choose this option to print so that the long edge is the top of the page.

### Passthru Printing Settings tab

The **Passthru Printing Settings** tab has controls that may be in effect when passthrough printing is chosen.

Passthrough printing prints directly to a printer and may be useful in situations where the page oriented nature of Windows print management conflicts with the non-page orientation of some older TIP applications.



Whenever possible, you should print using standard Windows print management (the default). Windows controls all page formatting based on property settings for a configured print driver on your PC. In this instance, the host application **must not** send any page control commands (i.e., form feeds) to the printer.

When you bypass Windows print management and print directly to a printer, the host application program must supply all page control. HGS Client simply passes all information directly through to a configured printer.

Note: The controls on this tab have no effect unless the **Passthru Printing** option is selected from the **Printer Output Type** group.

#### Print Direct Options

The options in this group control special line and form advancement.

##### Send LF after CR

Check this box to tell HGS Client to use CR LF at the end of a line.

##### Send CR after LF

Check this box to tell HGS Client to use LF CR at the end of a line.

##### Send CR after FF

Check this box to tell HGS Client to use FF CR at the end of a line.

##### Send FF on Close

Check this box to tell HGS Client to insert a FF at the close of the print.

##### Send LF at End of Screen

Check this box to tell HGS Client to add a LF at the end of each screen.

Note: This box should not be checked when using MAPPER AUX because MAPPER includes an LF at the end of the screen (you would get one more line). **Send LF at End of Screen** is for transactions that do not put in an LF, thus causing the next screen's data to print starting at the end of the last line.

##### Send FF at End of Screen

Check this box to tell HGS Client to add a FF at the end of each screen.

Note: This will send a Form Feed at the end of each screen or block from the host. If the host message does not include an EOMI status, this action is not taken, allowing data from multiple screens to be printed without the form feed.

##### No Auto-close Print

Check this box to tell HGS Client to keep the print open at the end of a print operation.

##### No Auto Page Feed

Check this box to tell HGS Client not to perform a page eject after printing.

#### Character Translations

The entries in this table may be used to specify the ASCII characters that HGS Client is to substitute when receiving special ASCII characters from the host.

##### Host Char.

In this column, enter the decimal representation of the anticipated ASCII host character.

##### Print Char. 1 through Print Char. 4

In these columns, enter the decimal representation of the ASCII replacement character(s) to be sent to the printer.

Example of translating the tilde (~) to the Esc character:

Host Char	Print Char 1
126	27

Note: If additional rows are needed for translation, press the right-mouse button over the table and select **Add Row** from the drop-down menu with the left mouse button. The new row will be inserted at the bottom of the table. The **Delete Row** item on the drop-down menu may be used to delete a selected row.

#### Printer Start and End Strings (max 41 chars)

The entries in this box can be used to provide special starting and ending strings to be sent to the certain printer devices. Up to 41 characters may be supplied for each string.

##### Start String

In this row, enter the decimal representations of the ASCII characters to be sent to the printer as a beginning string.

##### End Scrn Str

In this row, enter the decimal representation of the ASCII characters to be sent to the printer as an ending string at the end of each screen (when no EOMI present). If the End Screen string is present, the Send LF at end of screen and Send FF at end of screen are ignored.

##### End String

In this row, enter the decimal representations of the ASCII characters to be sent to the printer as an ending string.

#### Local Print Object tab

The controls in this group will be visible when the **Local Print Object** check box is checked.

##### Local Print Object Class Name

In this text box, enter the class name of the registered LPO or press the **Browse** button to search through all OLE Automation Servers registered with Windows.

##### User Option

In this text box, enter any required user options.

#### Local Print Objects

Local Print Objects (LPOs) are user-written OLE Automation Servers used in place of standard HGS Client terminal print handling to provide custom printing capability. LPOs may be developed in any language that supports the development of OLE Automation Servers (e.g., C++, Delphi, etc.).

LPOs may be developed whenever it is necessary to interpret screen print data in a manner other than it is presented on the terminal screen or sent from the host program.

#### Local Print Object Interface Specifications

Local Print Objects must adhere to the following interface specifications:

##### LPO\_Initialize

LPO\_Initialize is called once just before the first call to LPO\_Open. This method is provided to allow the LPO to perform any one-time initialization.

Format:

Function LPO\_Initialize (*Options* as Integer) as Integer

*Options* is the contents of the User Options entry on the printer device setup configuration. The LPO developer defines the content and use of this parameter. The emulator does not use or modify it in any way.

The LPO\_Initialize function must return the Window Handle of the LPO's main window if successful, or a zero if not successful. A Windows WM\_Close message is posted to the LPO's main window using this handle when the UTS screen is closed. This action is done to close the LPO automatically when its client UTS screen is closed.

**LPO\_Open**

LPO\_Open is called whenever the emulator opens the printer.

Format:

Function LPO\_Open (*ScreenRows* as Integer, *ScreenColumns* as Integer) as Integer

The emulator passes the screen size of the current screen in the *ScreenRows* and *ScreenColumns* parameters.

The return value must be a 1 or 0 indicating success or failure, respectively.

**LPO\_PrintData**

LPO\_PrintData is called whenever the emulator receives a screen print command. The command can come from the host or the keyboard.

Format:

Function LPO\_PrintData (*ScreenData* as WideString, *ScreenAttributes* as WideString, *CursorRow* as Integer, *CursorColumn* as Integer, *Flags* as Integer)

*ScreenData* and *ScreenAttributes* are passed as WideStrings, but are used as arrays of word (unsigned 16-bit integers).

The *ScreenData* array contains ALL characters in the screen. Double-byte characters are ORed with 100 hex for the lead byte and 200 hex for the trailing byte.

*ScreenAttributes* contains the attribute flags associated with the corresponding screen character. Attributes are defined as follows:

The *Flags* parameter indicates the type of terminal print function requested. For HGS Client, *Flags* are defined as follows: 0 = Print, 1 = Print Form, 2 = Print Transparent, 4 = Print Screen All.

The return value must be a 1 or 0 indicating success or failure, respectively.

**LPO\_Close**

LPO\_Close is called whenever the emulator closed the current print operation.

Format:

Function LPO\_Close as Integer

The return value must be a 1 or 0 indicating success or failure, respectively.

**LPO\_Show**

The emulator does not currently call LPO\_Show.

Format:

Function Show (*Options* as Integer) as Integer

The *Options* parameter is not yet defined.

The return value must be a 1 or 0 indicating success or failure, respectively.

**Generate Web Parameter Text**

This dialog provides the ability to generate the parameter text that can be copied to the Windows clipboard and subsequently pasted into the parameter file for the client page.

**Selections tab**

Use this tab to choose the configuration settings to include.

**Include Settings**

Choose from the options in this group to specify which configuration options are to be set in the generated text.

**Color Settings**

Check this box to include the configured color settings.

**Font Settings**

Check this box to include the configured font selection.

**Terminal Settings**

Check this box to include the configured terminal settings. The UTS settings are Force UPPERCASE, Blink Cursor, Initial Transmit Type, etc.

**Keyboard**

Check this box to include any configured keyboard keys. Note: If a UTS terminal key has the default keystroke assigned, it will not appear in the generated code.

**Macros**

Check this box to include the **Macro Selection** group.

**Printers**

Check this box to include printer settings.

**Check All**

Click this button to select all options in the group.

**User Restrictions**

Choose from the options in this group to specify the level of restriction to be placed on the user.

**Allow User Configuration**

Checking this box will enable user to change their configuration settings.

**Allow Macro Recording**

Checking this box will enable the user to use the key macro recorder feature.

**Allow Macro Run**

Checking this box will enable the user to run key macros.

**Macro Selections**

Select each macro desired from the Available Key Macros list box and with the controls provided, copy (>) them to the Selected Key Macros list box. There are also controls to remove (<) macros from selection.

[These options are only visible if the Macros box is checked in the Include Settings group.](#)

Notes on file placement:

Macros may be created manually by this admin program or with the HGS Client. The HGS Client has an additional feature, a built-in Macro Recorder, which may be useful for recording initial sign-on steps. In all cases, macros are placed in the MACROS.CFG file.

The client stores the MACROS.CFG file in the Application Data directory (normally, C:\Documents and Settings\*<your-user-id>*\Application Data\KMSystems\HGSUTSClient\_4.0\CONFIGURATION\). The admin program expects this file to be in its installation directory (normally, C:\Program Files\KM SYS Worldwide\HGS UTS\4.0\Admin\).

[If you use the client to record the initial macro, you will subsequently need to copy the MACROS.CFG file to the installation directory of the admin program before the macro will appear in the Available Key Macros list box. Further note that any macros created previously with the admin program will be lost unless manually merged with the ones from the client program.](#)

**Generate as Plain Text**

Check this box to cause the HGS Configuration Administrator to produce plain text parameters instead of XML name value pairs. This option is normally only required for guided testing by KMSYS Worldwide, Inc. support personnel.

**Generate**

Click this button to generate the XML code that will be copied into the parameter file for the client page.

**Copy**

Click this button to place the definitions on the Windows clipboard.

**Close**

Click this button to close the **Generate Web Parameter Text** dialog.



## Editing Macros

### Edit Macro

The **Edit Macro** window is used to create and edit a string of successive keystrokes, waits and conditions that can comprise a macro.

### Key Macro Name

In this text box, enter the name of the macro as it will appear on the **Macros** menu or macro bar.

### Macro Function List

This list box contains a serial list of keystrokes, timed waits, prompts and wait conditions that can be included in a key macro. Select from this list when replacing, deleting or moving a function in the list.

### Add

Click this button to reveal a drop-down menu containing six different types of functions that may be included in the macro.

#### Terminal Key Function

Make this selection to bring up the Select Terminal Key Function window where a single UTS or HGS Client terminal keystroke (e.g., SOE, XMIT, CLIPBOARD\_COPY, etc.) may be selected.

#### Text String

Make this selection to initiate the Text String dialog used to enter a string of text in the macro.

#### Text String Prompt

Use this selection to place a user prompt dialog in the macro. The selection displays the Edit Prompt for Text window where a user prompt string may be entered. When the macro is run, the dialog will be displayed with the user prompt, querying the user to enter a text string.

#### Cursor Position

Use this selection to place the cursor at a particular row and column. This selection displays the Position Cursor dialog where the row and column may be entered.

#### Timed Wait

Make this selection to specify that the macro should wait for a period of time. The selection displays the Timed Wait window where the pause time is specified in seconds.

#### Wait for String

Select this item to insert a conditional wait in the macro. The ensuing Wait for String dialog allows you to specify a search string, the location of the search string on the screen, an equal or not equal operator and a timed wait value.

### Replace

After selecting a function from the **Macro Function List** box, click this button to replace the function with a different function, or edit the selected function. This button drops down the same selection menu as described for the **Add** button (see above).

### Delete

After selecting a function from the **Macro Function List** box, click this button to delete the function from the macro.

### Move Up

Press this button to move the selected function up in the macro.

### Move Down

Press this button to move the selected function down in the macro.

### Revert

Clicking this button will revert any changes to the macro since the dialog was opened.

**OK**

Click this button to accept the changes to the macro and close the window.

**Cancel**

Click this button to discard any changes and close the window.

**Edit Prompt for Text**

This window allows a user prompt to be entered and placed in the macro.

**Enter User Prompt**

In this text box, enter the prompt to be displayed when the user is asked to enter a text string.

**Password Entry**

Check this box to password protect the text entered by the user. Password protection causes asterisks (\*) to be displayed in the text box as the user enters the text string.

**OK**

Click this button to accept the entries and close the window.

**Cancel**

Click this button to discard the entries and close the window.

**Position Cursor**

This window allows you to position the cursor to a location on the screen.

**Column**

In this text box, enter the column to place the cursor.

**Row**

In this text box, enter the row to place the cursor.

**OK**

Click this button to accept the entries and close the window.

**Cancel**

Click this button to discard the entries and close the window.

**Select Terminal Key Function**

This window allows the entry of single UTS terminal key or HGS Client key functions into the macro.

**Type List Search String**

In this text box, enter a partial or full terminal key function name. Type only enough of the name to highlight the desired key function in the key function list box below this list box.

**OK**

Click this button to select the highlighted key function.

**Cancel**

Click this button to cancel the selection process.

**Text String**

This window allows the macro developer to enter a string of text in the macro.

**Enter a Text String**

In this text box enter the text string. The string of text will be inserted at the current cursor position on the screen.

**OK**

Click this button to accept the text entry and close the window.



**Cancel**

Click this button to discard the entry and close the window.

**Timed Wait**

This window allows the entry of a pause in the execution of the macro. The timed wait is useful when communications is slow and a large amount of processing from the host occurs before returning control to the terminal screen.

**Enter Wait Time in Seconds**

In this text box, enter the number of seconds the macro is to wait before resuming processing of the next macro function.

**OK**

Click this button to accept the entry and close the window.

**Cancel**

Click this button to discard the entry and close the window.

**Wait for String**

This window allows a conditional wait to be placed in the macro. The macro will wait for the presence or absence of a string returned from the host.

**String Value**

In this text box, enter the string to look for on the screen. The value entered is case insensitive.

**String Location**

This group allows the location on the screen of the anticipated text string.

When choosing the location on the screen to test for a string, you should be aware of the sequence of events that occurs, before the macro gets control to do the testing. For example, in DEMAND mode, most output received from the host is painted on the next to last line of the terminal display. Before control is returned to the macro, a CURSOR TO HOME and DELETE LINE is issued, thus moving the output to two lines from the bottom of the display. Thus, on a 24-line display, testing should be performed on row 22, not row 23.

**Row**

In this text box, specify the row where the beginning of the string is expected.

**Relative to Current Row**

If this box is checked, the value entered in the **Row** text box is relative to the current row of the cursor.

**Column**

In this text box, specify the column where the beginning of the string is expected.

**Relative to Current Column**

If this box is checked, the value entered in the **Column** text box is relative to the current column of the cursor.

**Any position in Entire Screen**

Check this box to look for the string beginning at any position on the screen.

**Wait for String To Be**

This option group is used to specify if the condition checked for is true or false.

**Equal =**

Select this option to check for an equal condition.

**Not Equal <>**

Select this option to check for a not equal condition.

**Wait Time (seconds)**

In this text box, enter the number of seconds to wait before failing the test. In other words, this is the interval of time to wait for the presence (=) or absence (<>) of the anticipated string. When this time is exceeded, a time-out message box will appear during macro execution.

**OK**

Click this button to accept the entries and close the window.

**Cancel**

Click this button to discard the entries and close the window.

**Macro Screen Control Sequence**

This window allows you to add UTS control sequences to a macro. Consequently, control sequences can be passed directly to the screen, thus allowing control page updates or setting FCCs in the screen.

**Control Sequence**

This box contains a string of "characters" that make up a UTS control sequence.

Control characters are always entered as symbolic names enclosed within angle brackets "<>". If a "<" character is needed, it can be entered as "<<>". The **Control Char Symbols** drop-down list box and the **Add Ctl. Char** button may be used to select control characters or they may be typed directly (encased in angle brackets) into the **Control Sequence** text box.

The following Control Sequence moves the cursor to the home position, clears the entire screen then sets up an FCC field with video off to allow hidden entry of a user id and password:

```
<ESC>e<ESC>m<US> E@
```

The user id and password would be entered with the TEXT function.

The following sequence would restore video on:

```
<ESC>e<ESC>m<US> D@
```

**Control Char Symbols**

Select a control character symbol from this drop-down list box and click the **Add Ctl. Char** button to insert the control character into the **Control Sequence** text box.

**Add Ctl. Char**

Click this button to insert the selected control character into the **Control Sequence** text box.

**OK**

Click this button to accept the entries and close the window.

**Cancel**

Click this button to discard the entries and close the window.

## How to...

### Configuring UTS Keys

To change an UTS key, follow this procedure:

1. Click the **Keyboard** button on the **HGS UTS Configuration Administrator** window.
2. Select a key from the **UTS Terminal Keyboard Key Names** list box.
3. Press the desired key or key combination (any key plus **Alt**, **Ctrl** and/or **Shift**) on the visual keyboard.
4. Press the **Set Assignment** button.
5. If a key is already defined, a message window will appear allowing you to replace (**Redefine**) the existing definition or **Add** an additional definition.
6. Press the **OK** button.

### Creating and Maintaining Key Macros

A key macro is a series of keystrokes and functions that when strung together perform frequently used, repetitive tasks. The simplest way to create a new macro is to use the macro recorder in the HGS client. Once the initial macro has been created, it can be tailored to your needs with the **Edit** macro feature of the HGS UTS Configuration Administrator.

Take, for example, a macro that will initially edit an element in a program file, but will be modified later to prompt the user for the file, element and version name.

To initially record the macro:

1. Select **Start Recorder** from the **Macros** menu on a HGS Client UTS Screen.
2. Perform your 2200 task as usual.

In the example mentioned above, an SOE is typed followed by the IPF processor call and a few IPF commands as follows:

```
▶@ipf pf.
▶IPF 1100 6R3 12/09/98 16:45:25
▶~C~▶old element
▶~C~▶mode screen
```

3. Select **Stop Recorder** from the **Macros** menu.
4. In the **Save Key Macro** window that appears, give the macro a name in the **Key Macro Name** text box and press the **OK** button.

To modify the macro:

1. Click the **Macros** button on the **HGS UTS Configuration Administrator** window.
2. Select the desired macro from the **Available Macros** list box and click the **Edit** button.
3. In the **Edit Macro** window, add, replace, delete or move functions from the **Macro Function List** box with the button controls on the right of the window. Note: The **Add** button will add a function above the selected function in the **Macro Function List** box

When the macro recorder was executed, HGS Client inserts a WAIT for 2 seconds at the beginning of the macro and after each TRANSMIT KEY. These waits are used to pause for a period-of-time, thus giving the host time to process the information transmitted to the host and respond. Some of the waits may be decreased or even deleted while others may need to be increased depending upon the speed of communications and the amount of time for the host to respond.

In the example, we will replace the WAIT at the beginning of the macro with an ERASE DISPLAY, a WAIT 1, a CURSOR TO HOME and an ERASE DISPLAY.

The "@IPF PF." text string will be replaced with "@IPF " followed by the text string prompt, "Enter file name."

The "old element" will be replaced with "old " followed by the text string prompt, "Enter element/version."

4. Click the **OK** button to complete the modification.

To add the macro to the **Macros** menu or the Macro button bar:

1. Select the desired macro from the **Available Macros** list box.
2. Click the **Set/Clear Show Macro Button on Macro Bar** button and/or the **Set/Clear Show Macro in Menu Option** button (the two buttons above the **Revert** button).

To add a key sequence to activate the macro from the keyboard:

1. Select the desired macro from the **Available Macros** list box.
2. Press the **Type Sequence** button.
3. Strike the key combination you wish to use as the activation key sequence.
4. Click **Yes** on the **Confirm Activation Key** window.
5. Press the **OK** button to exit the configuration program.

## Miscellaneous

### Font Limitations

The ability to increase/decrease font size by a single point only works properly when using scalable fonts like the True Type font, Courier New (installed with Windows). Non-scalable fonts have a fixed number of point sizes available (e.g., 6, 9, 11, 14, etc.) and are missing several point sizes (e.g., 7, 8, 10, 12, 13); consequently, HGS Client will be unable to increment/decrement to the missing sizes. To select a different font, follow this procedure:

1. Select **Screen and Font Settings** from the **Options** menu.
2. Select a font from the **Available Fonts** drop-down list box.
3. Press the **Save** button to make the selection permanent.
4. Press the **Close** button.

Note: All of the True Type fonts are scalable.

### Technical Support

If you are experiencing difficulties configuring HGS Client or are experiencing runtime difficulties, please consult the person responsible for maintaining communications at your site for assistance. If difficulties persist, please contact the Technical Support Group at KMSYS Worldwide, Inc., through one of the following:

Internet E-mail – support@kmsys.com  
Facsimile – (770) 635-6351  
Telephone – (770) 635-6363

**KMSYS Worldwide, Inc.**  
Technical Support Group  
1905 Woodstock Road  
Suite 2100  
Marietta, GA 30075  
U.S.A.



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