



AssuredSAN 4000 Series Interface Customization Guide

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Adobe PostScript

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About this guide

This guide introduces the Customization Tool Kit and describes the process for customizing elements of the WBI and CLI for AssuredSAN storage systems.

Intended audience

This guide is intended for

- Storage system administrators.
- Configuration managers.
- Web GUI developers.

Prerequisites

Prerequisites for using this product include knowledge of:

- Network administration.
- Storage system configuration.
- Image editing and creation.

Related documentation

For information about	See
Enhancements, known issues, and late-breaking information not included in product documentation	Release Notes
Overview of product shipkit contents and setup tasks	Getting Started*
Regulatory compliance and safety and disposal information	AssuredSAN Product Regulatory Compliance and Safety*
Using a rackmount bracket kit to install an enclosure into a rack	AssuredSAN Rackmount Bracket Kit Installation* <i>or</i> AssuredSAN 2-Post Rackmount Bracket Kit Installation*
Product hardware setup and related troubleshooting	AssuredSAN 4000 Series Setup Guide
Using the CLI to configure and manage the product	AssuredSAN 4000 Series CLI Reference Guide
Event codes and recommended actions	AssuredSAN 4000 Series Service Guide
Identifying and installing or replacing FRUs	AssuredSAN 4000 Series Service Guide

* Printed document included in product shipkit.

For additional information, see Dot Hill's Customer Resource Center web site: <http://crc.dothill.com>.


For additional information about Perl installations and required modules see: <http://www.perl.org/>


Document conventions and symbols

Table 1 Document conventions

Convention	Element
Blue text	Cross-reference links and e-mail addresses
Blue, underlined text	Web site addresses
Bold font	<ul style="list-style-type: none">• Key names• Text typed into a GUI element, such as into a box• GUI elements that are clicked or selected, such as menu and list items, buttons, and check boxes
<i>Italics font</i>	Text emphasis
Monospace font	<ul style="list-style-type: none">• File and directory names• System output• Code• Text typed at the command-line
<i>Monospace, italic font</i>	<ul style="list-style-type: none">• Code variables• Command-line variables
Monospace, bold font	Emphasis of file and directory names, system output, code, and text typed at the command line

 **CAUTION:** Indicates that failure to follow directions could result in damage to equipment or data.

 **IMPORTANT:** Provides clarifying information or specific instructions.

 **NOTE:** Provides additional information.

 **TIP:** Provides helpful hints and shortcuts.

1 Getting Started

You can use the Customization Tool Kit (CTK) to alter the appearance of WBI screens and panels and the CLI for product, corporate, or marketing requirements.

With the CTK, you can:

- Replace default WBI files with customized files, created using a text or image editor.
- Review changes made to the WBI.
- Hide Dot-Hill-specific information in the CLI.

The CTK is a set of Perl-based scripts that places editable files in a “Sandbox” directory for customization, places all necessary files (edited, unedited, and non-editable) in a staging directory for a testing, and packages all necessary files for return to Dot Hill Systems for validation and deployment.

The CTK is not an editor. Third-party editing tools are required to make changes to text and image files; such tools are not included in the CTK installation. Installation and usage of those third party tools falls outside the scope of this document.

Tools for customizing files

Two general types of files may be customized: text and image. Choose editing tools that adhere to the following criteria.

Text editing requirements:

- Save files leaving file type extensions in place
- Save files leaving line breaks in place
- Save files without transforming spaces (strip, trim, convert to tabs, and so forth)
- Save files without adding meta-tags (word processing applications are not recommended)
- Check for well-formedness (for mark-up files such as HTML)

Image editing requirements:

- Create, edit, and save Portable Network Graphics (.png) files with transparency intact
- Create, edit, and save Graphics Interchange Format (.gif) files with transparency intact
- Create, edit, and save Favicons

Use a web browser to preview the customization. Supported web browsers are:

- Mozilla Firefox 3 or later, or
- Microsoft Internet Explorer 8 or later

Understanding automatic changes to the user interfaces

Several changes occur in both the WBI and CLI simply by installing a customization file. These changes hide references to “Dot Hill” or “AssuredSAN” and protect the OEM nature of Dot Hill’s relationship with its partner.

- | | |
|---------------------|---|
| WBI and CLI changes | <ul style="list-style-type: none">• Enclosure model is hidden• Enclosure vendor is hidden• SCSI Product ID is hidden• SCSI Vendor ID is hidden |
| CLI only changes | <ul style="list-style-type: none">• Parameter added to the <code>show system</code> command displays SCSI Vendor ID and SCSI Product ID for auditing or confirmation purposes. This command is restricted to customized systems and does not appear in other documentation. |

These changes affect the system only after the customization file created in this process has been installed.

Determining what level of customization is appropriate

Because so many aspects of the WBI can be customized, determine what level of customization is required in advance.


Considering a tiered approach

A tiered approach allows you to separate the changes into easily managed, progressively more involved tasks as time or resources allow.

Tier 1 - Change the application name and logos, favicon, and product and brand IDs. This can be used for quick re-branding, or in situations where extensive changes are not needed or fall outside the scope of allotted time or effort. [Signing in to RAIDar](#) is, also, easily changed in this tier with the caveats described below.


Tier 2 - Change the above, and color scheme for banners, tabs, buttons, panes (System Status, Configuration View, System Overview), selection highlighting, and tree trunks and branches.

Tier 3 - Change the above, and icons that represent system components (such as vdisks and volumes) and statuses (such as component health and event severity). Changing SCSI product and vendor IDs is an option, but should only be done after reviewing [Changing SCSI ID values](#) on page 8 and [Editing restrictions](#) on page 17, and fully understanding the affects this has on your system.

 **IMPORTANT:** The *AssuredSAN 4000 Series RAIDar User Guide* describes the baseline colors denoting storage space. Changing the colors of storage space color codes does not impact functionality; however, you should note changes to those colors so users of that documentation are aware of the new values.

Changing SCSI ID values

The CTK allows you change the SCSI vendor ID and SCSI product ID. These values must be changed together, and only when you have officially assigned IDs. Unqualified IDs may invalidate certifications and cause incompatibilities with existing software. Re-branding alone does not require recertification; however, changing the SCSI vendor or product IDs might.

 **CAUTION:** Host access may fail if the SCSI vendor ID or SCSI product ID are changed to unqualified values. Do not change these values separately, or without officially assigned IDs.

When changing the `scsi-vendor-id` and `scsi-product-id` values, ensure that you accurately enter the appropriate values and adhere to guidance provided in [Editing restrictions](#) on page 17. After customization, these values no longer appear by default in the WBI or CLI and are only displayed through the CLI via the `show system detail` command. These values do not appear in the WBI mock-up provided for testing purposes.

The customization script performs a rudimentary check of the `scsi-vendor-id` and `scsi-product-id` values. This check does not ensure the validity of the values, but merely checks for appropriate length. Max length for `scsi-vendor-id` is eight characters and `scsi-product-id` is 16 characters.

Because of potential adverse consequences, changing `scsi-vendor-id` and `scsi-product-id` values should be reserved for users who fully understand these values' functions and are prepared to troubleshoot issues arising from these changes.

Support for changing the SCSI vendor ID and SCSI product ID, software recertification and certification transfer fall outside the scope of this document.

Using the CLI and RAIDar

This provides a brief introduction to the CLI and RAIDar. Use this information to test your customizations after you have installed the packet. For more information, see the *AssuredSAN 4000 Series CLI Reference Guide* and *AssuredSAN 4000 Series RAIDar User Guide*.

CLI

The CLI software embedded in the controller modules enables you to manage and monitor storage-system operation.

Signing in to the CLI


1. Access the CLI using one of the following options:
 - Use Telnet, an SSH application, or a terminal emulator on a management host that is remotely connected through a LAN to a controller module's network port. See the *AssuredSAN 4000 Series Setup Guide* for information about setting management port IP addresses using the CLI.
 - By using a terminal emulator on a management host that is directly connected to a controller module's serial CLI port.
2. When prompted with `login`, enter the user name and press **Enter**. The default user name is `manage`.
3. When prompted with `password`, enter the password and press **Enter**. The default password is `!manage`.

If you are logging in to the CLI for the first time, the Language field displays `user setting` or `English`, either of which results in English.

Commands

SCSI ID values display in two commands, `show inquiry` and `show system`.

Command references that include a See Also section include two types of references. Commands in blue with a page number are commands referenced in this guide. All other references, in black, can be found in the *AssuredSAN 4000 Series CLI Reference Guide*.

 **NOTE:** Command references in the See Also section can be found in the *AssuredSAN 4000 Series CLI Reference Guide*

`show inquiry`

Description Shows inquiry data for each controller module.

Syntax `show inquiry`

- Output**
- Product vendor name, product ID, and vendor ID
 - MC firmware version and loader version
 - SC firmware version and loader version
 - Controller module serial number
 - MAC address
 - Network port IP address

Example Show inquiry data for a system in which controller B is not installed:

```
# show inquiry
Product Information
-----
Vendor Name:
Product ID: model
SCSI Vendor ID: vendor

Inquiry Controller A
-----
Management Controller Code Version: L240R001
Management Controller Loader Code Version: 2.5
Storage Controller Code Version: T240R01
Storage Controller Loader Code Version: 23.008
Serial Number: SN
MAC Address: 00:C0:FF:29:41:60
IP Address: 10.134.1.100

Inquiry Controller B
-----
Management Controller Code Version: Not Present
Management Controller Loader Code Version: Not Present
Storage Controller Code Version: Not Present
Storage Controller Loader Code Version: Not Present
Serial Number: Not Present
MAC Address: Not Present
IP Address: Not Present

Success: Command completed successfully. (2012-01-18 15:05:25)
```

See also • versions

show system

Description Shows information about the system. If the system's health is not OK, each unhealthy component is listed with information to help you resolve the health problem.

Syntax show system

Output System Name
Storage system name. The default is Uninitialized Name.

System Contact
The name of person who administers the system. The default is Uninitialized Contact.

System Location
The location of the system. The default is Uninitialized Location.

System Information
A brief description of what the system is used for or how it's configured. The default is Uninitialized Info.

Midplane Serial Number
The serial number of the controller enclosure midplane.

Vendor Name
Vendor name.

Product ID
Product model identifier.

Product Brand
Product brand name.

SCSI Vendor ID
Vendor name returned by the SCSI INQUIRY command.

SCSI Product ID
Product identifier returned by the SCSI INQUIRY command.

Enclosure Count
Number of enclosures in the storage system.

Health

- OK
- Degraded
- Fault
- Unknown

Health Reason
If Health is not OK, this field shows the reason for the health state.

PFU Status
PFU status.

Supported Locales
Supported display languages: English, Spanish, French, German, Italian, Japanese, Dutch, Chinese-Simplified, Chinese-Traditional, Korean.

Example Show information for a system whose health is OK:

```
# show system
System Information
-----
System Name: Storage-1
System Contact: J. Smith
System Location: Main lab
System Information: Used for order processing data
Midplane Serial Number: SN
Vendor Name: vendor
Product ID: product
Product Brand: brand
SCSI Vendor ID: vendor-ID
SCSI Product ID: product-ID
Enclosure Count: 2
Health: OK
Health Reason:
PFU Status: Idle
Supported Locales: English, Spanish, French, German, Italian, Japanese, Dutch,
Chinese-Simplified, Chinese-Traditional, Korean

Success: Command completed successfully. (2011-10-10 15:28:14)
```

Show information for a system whose health is degraded because of a problem with a vdisk:

```
# show system
System Information
-----
System Name: Storage-2
System Contact: J. Smith
System Location: Main lab
System Information: Used for testing
Midplane Serial Number: SN
Vendor Name: vendor
Product ID: product
Product Brand: brand
SCSI Vendor ID: vendor-ID
SCSI Product ID: product-ID
Enclosure Count: 1
Health: Degraded
Health Reason: See the information about unhealthy components for guidance.
PFU Status: Idle
Supported Locales: English, Spanish, French, German, Italian, Japanese, Dutch,
Chinese-Simplified, Chinese-Traditional, Korean

Unhealthy Component
-----
Component ID: Vdisk vd01
Health: Degraded
Health Reason: The vdisk is not fault tolerant. Reconstruction cannot start
because there is no spare disk available of the proper type and size.
Health Recommendation: - Replace the failed disk.
- Configure the new disk as a spare so the system can start reconstructing the
vdisk.
- To prevent this problem in the future, configure one or more additional disks
as spare disks.

Success: Command completed successfully. (2012-01-19 10:37:52)
```

See also • set system

RAIDar

RAIDar is a web-based application for configuring, monitoring, and managing the storage system.

Each controller module in the storage system contains a web server, which is accessed when you sign in to RAIDar. In a dual-controller system, you can access all functions from either controller. If one controller becomes unavailable, you can continue to manage the storage system from the partner controller.

RAIDar is also referred to as the WBI.

Browser setup

- Use Mozilla Firefox 3 or later, or Microsoft Internet Explorer 8 or later.
- To see the help window, you must enable pop-up windows.
- To optimize the display, use a color monitor and set its color quality to the highest setting.
- To navigate beyond the Sign In page (with a valid user account):
 - Set the browser's local-intranet security option to medium or medium-low. For Internet Explorer 8, adding each controller's network IP address as a trusted site can avoid access issues.
 - Verify that the browser is set to allow cookies at least for the IP addresses of the storage-system network ports.

Signing in to RAIDar

1. In the web browser's address field, type the IP address of a controller network port and press **Enter**. The RAIDar Sign In page is displayed. If the Sign In page does not display, verify that you have entered the correct IP address.
2. On the Sign In page, enter the name and password of a configured user. The default user name and password are `manage` and `!manage`. If you are logging in to RAIDar for the first time, the Language field displays `user setting` or `English`, either of which results in English.
3. Click **Sign In**. If the system is available, the System Overview page is displayed; otherwise, a message indicates that the system is unavailable.

Tips for signing in and signing out

- Do not include a leading zero in an IP address. For example, enter 10.1.4.6 not 10.1.4.06.
- Multiple users can be signed in to each controller simultaneously.
- For each active RAIDar session an identifier is stored in the browser. Depending on how your browser treats this session identifier, you might be able to run multiple independent sessions simultaneously. Internet Explorer can run separate RAIDar sessions if you select New Session in the File menu. If you do not select this then all instances of Internet Explorer share the same session, as does Firefox.
- End a RAIDar session by clicking the Sign Out link near the top of the RAIDar window. Do not simply close the browser window.

2 Using the Customization Tool Kit

Preparing the Perl environment


For the CTK to function properly, you must:

- Install the CTK on the same system as the Perl executable
- Have permission to run the Perl executable
- Map the `.pl` extension to the Perl executable (Windows)

Required installations

You must install:

- Perl 5.05
- `Win32::console::ANSI.pm` (for Windows systems only)
- `Image::Size.pm`
- `File::Copy::Recursive.pm`

 **NOTE:** Procedures for installing Perl and associated packages fall outside the scope of this document as installation varies from platform to platform and enterprise to enterprise.

Installing the Customization Tool Kit

The CTK installation file, `CTK.zip`, contains the scripts and directories needed to customize the WBI.

To install:

1. Specify a location on the same system as the Perl executable and extract `CTK.zip` to that location. This creates the `ctk` directory.
2. In the `ctk` directory, open a command prompt.
3. Run `ctk.pl --p` to finish installation. The following directory structure is created:

```
ctk
  lib
  Sandbox
  Source
  Staging
```

- The `lib` directory contains Perl scripts related to CTK functionality.
- The `Sandbox` directory contains all customizable files.

 **CAUTION:** Only edit files in the `Sandbox`. Editing other files will result in an invalid customization.


- The `Source` directory contains the baseline WBI interface files.
- The `Staging` directory will contain the customized WBI after running the `customize` option. The customized mock-up created in the `Staging` directory is for inspection and limited testing, and is neither deployed nor functional.

Running the Customization Tool Kit

The CTK runs with parameters from a command prompt with the syntax `ctk.pl --parameter`, where:

- `ctk.pl` runs the script
- `parameter` determines the action taken by the script

Running `ctk.pl` without a parameter displays the CTK Help.

 **NOTE:** This document does not include the command prompt or Perl invocation when describing the script or parameters as Perl functionality may differ from platform to platform. For example, `C:\ctk>perl ctk.pl --p` might be written as `ctk.pl --p`.

Using appropriate parameters

The CTK consists of one script that performs several functions. Use parameters to direct script function. A parameter is specified using either the first letter or the full word. Parameters `--p` and `--prepare` are equivalent. In [Table 2](#), the full word option appears in brackets.

Table 2 CTK Parameters and functions

Parameter	Function
<code>--b [undle]</code>	Packages the customization for delivery to Dot Hill Systems for validation.
<code>--c [ustomize]</code>	Builds a mock-up of the customized WBI for inspection and limited testing in the <code>Staging</code> directory. This option does not deploy the customization, nor is the WBI in the <code>Staging</code> area functional.
<code>--h [elp]</code>	Displays a quick summary of available parameters
<code>--l [oad]</code>	Places a previously bundled customization in the <code>Sandbox</code> directory, then builds the <code>Staging</code> directory based on those customizations. This overwrites any customization that may exist in either directory.
<code>--p [repare]</code>	Copies editable files from the <code>Source</code> to the <code>Sandbox</code> directory, and builds a version of the WBI in the <code>Staging</code> directory. Files that have been customized are not over-written with this option.
<code>--p [repare]</code> <code>--f [orce]</code>	Copies editable files from the <code>Source</code> to the <code>Sandbox</code> directory, and builds a version of the WBI in the <code>Staging</code> directory. <code>Prepare</code> and <code>Force</code> together differ from <code>Prepare</code> alone in that files that have been customized are over-written.

Preparing to customize the interface

To create a sandbox, run `ctk.pl --p`

This places editable files in the `Sandbox` directory of the Customization Toolkit and creates a viewable `index.html` file in the `Staging` directory.

Customizing the interface

 **CAUTION:** Failure to adhere to the [Editing restrictions](#) when customizing your interface may result in loss of data or failure to build the customization.

The customization process follows the iterative pattern of edit, build, test, repeat. The build step is required to assemble the customized and non-customized files in the `Staging` directory.


Only customize files in the sandbox. This location segregates files available for customization while protecting important files that should not be changed.

1. Determine which files need to be edited for this customization. See [Determining what level of customization is appropriate](#) on page 8 and [Customizable files](#) on page 21 for an overview of customizable files and their associated functionality.

2. Edit files as appropriate for the customization plan. Strictly adhere to [Editing restrictions](#).
3. Run `ctk.pl --c` to build a customized version of the WBI.
4. Exit any browser window displaying the WBI.
5. Open a new browser window and clear the browser cache.

 **IMPORTANT:** As browsers cache pages, skipping [step 4](#) and [step 5](#) may result in a previous version being displayed.

6. In the `Staging` directory, click `index.html` to open the test WBI in a browser.
7. Test the customization. See [Testing the customized interface](#) on page 18.
8. Repeat from [step 1](#), as necessary, to complete the customization.

 **IMPORTANT:** Perform all customizations in the `Sandbox` directory. The `Staging` directory is volatile and changes made there are overwritten the next time `ctk.pl --c` is run.

Editing restrictions

Observe these restrictions when customizing files.

 **CAUTION:** Failure to adhere to these restrictions may result in loss of data or failure to build the customization.

In general:

- Do not add unnecessary files to any `ctk` directory. Store temporary, work, or notes files in a directory outside of the `ctk` directory.
- Do not rename files. Files must keep the same name as the original.
- Maintain the same file type as the original. Simply changing a file extension is not adequate, files must be saved as that file type.

Graphics files:

- Custom graphics files must be the same dimensions and type as the original files unless otherwise stated in [All customizable WBI images](#) on page 25.
- Duplicate files with differing extensions exist in the `images` directory. Files with the `.gif` extension are included for backwards compatibility only. Files with the `.png` extension are used in current browser versions. These files should be identical in appearance to maintain consistency from browser to browser.

In the `brandInfo.ini` file:

- Do not enter spaces before or after the `'='`
- Change the `vendor-name`, `product-id`, and `product-brand` as needed. These are not programmatic values and do not affect functionality. These values, also, accept multi-byte Unicode characters.
- Avoid changing the `scsi-vendor-id` and `scsi-product-id`. See [Changing SCSI ID values](#) on page 8 for more information.

In other text files:

- Check mark-up files such as HTML files for well-formedness after editing.
- Express colors in hexadecimal format. That is, enter blue as `'#0000FF'` rather than `'blue'`.

Customizing buttons and tabs

Tabs and buttons are a special case as they consist of two images per state per size: The left edge and the remainder, or the right portion, where text is displayed. When customizing buttons and tabs, ensure that both left and remainder files for all sizes and all states are customized.

Note there are subtle differences in color for each tab and button in [Table 3](#) on page 18. These differences represent different states. The different states for controls are:

- disabled
- down (buttons only)
- emphasized
- normal
- selected (tab only)
- over

Table 3 Button and tab structures

Function	Left	Remainder
Button normal		
Button emphasized (focus)		
Button over (hover)		
Button down (press)		
Button disabled		
Tab normal		
Tab emphasized (focus)		
Tab over (hover)		
Tab selected		
Tab disabled		

Testing the customized interface

In the `Staging` directory, open `index.html` in a web browser. This presents an operational mock-up of the WBI. For testing purposes, the sign-in page does not require a username or password.

Because of the high level of customization available, the person doing the customization is best suited to determine what aspects of the WBI need to be tested.

During testing, consider:

- Correct spelling for textual changes.
- Color matches between panes.

- Color matches between states of items.
- Appropriate changes in button appearance during “over,” “down,” and “disabled” operation.
- Appropriate contrast between font and background colors.
- Appropriate messaging from Health, Status, and other communication icons.
- Desired appearance of WBI Help pages.

 **IMPORTANT:** If the SCSI Product ID and SCSI Vendor ID have been changed, ensure the entered values are correct and qualified.


Functionality cannot be customized. If errors occur, or if the presentation of information changes beyond what has been customized, functional errors may have been introduced during the customization process. For more information about correcting functional errors in the WBI that have been introduced during the customization process, see on page 19.

To test the WBI:

1. Verify names and logos that you changed on the sign-in page.
2. Sign in and browse the component and task panels to verify text and graphics that you changed.
3. In the Configuration View panel, right-click on the system and select **View > Test Buttons** to view buttons in all states of activity.
4. In the Configuration View panel, right-click on the system and select **View > Test Tabs** to view tabs in all states of activity.
5. Click the **Help** icon and view text and graphics changes for the help window.

Restoring the baseline WBI

If you introduced errors during the customization process, or if the default presentation is preferred, run `ctk.pl --p --f` to overwrite all `Sandbox` directory files with the original source code, remove all customizations, and restore the original interface in the `Staging` directory.

 **CAUTION:** Returning to a baseline WBI eliminates all changes. Only perform this procedure to return to a baseline WBI interface, or to eliminate functional errors introduced during customization.


CTK logic assumes that the `Source` directory has not changed. If errors have been introduced because of changes made in the `Source` directory, you must re-install the CTK. See [Installing the Customization Tool Kit](#) on page 15.

Packaging the customized interface

Once you thoroughly test and are satisfied with the customized WBI:

1. Run `ctk.pl --b` to package the finished customization. This creates a `CUSTOMIZATION.zip` in the `ctk` directory.
2. Forward the `CUSTOMIZATION.zip` to your Dot Hill Systems Engineer.

Dot Hill Systems validates the customized WBI and is the final arbiter for implementation.

 **IMPORTANT:** You are responsible for creating a valid customization. Dot Hill Systems does not provide GUI development services.

Once the customization has been verified, Dot Hill will provide a binary customization image (`.bin` file) that can be installed on your controllers. You are responsible for updating your controllers with the file.

A Customizable files

This appendix describes interface elements and associated files that you can customize. It follows the tiered approach suggested on [page 8](#).

NOTE: Logos and application names may change without notice as newer versions of the AssuredSAN storage system become available.

Tier One customization

Figure 1 and Table 4 show commonly customized Tier One elements on the sign-in and main pages.

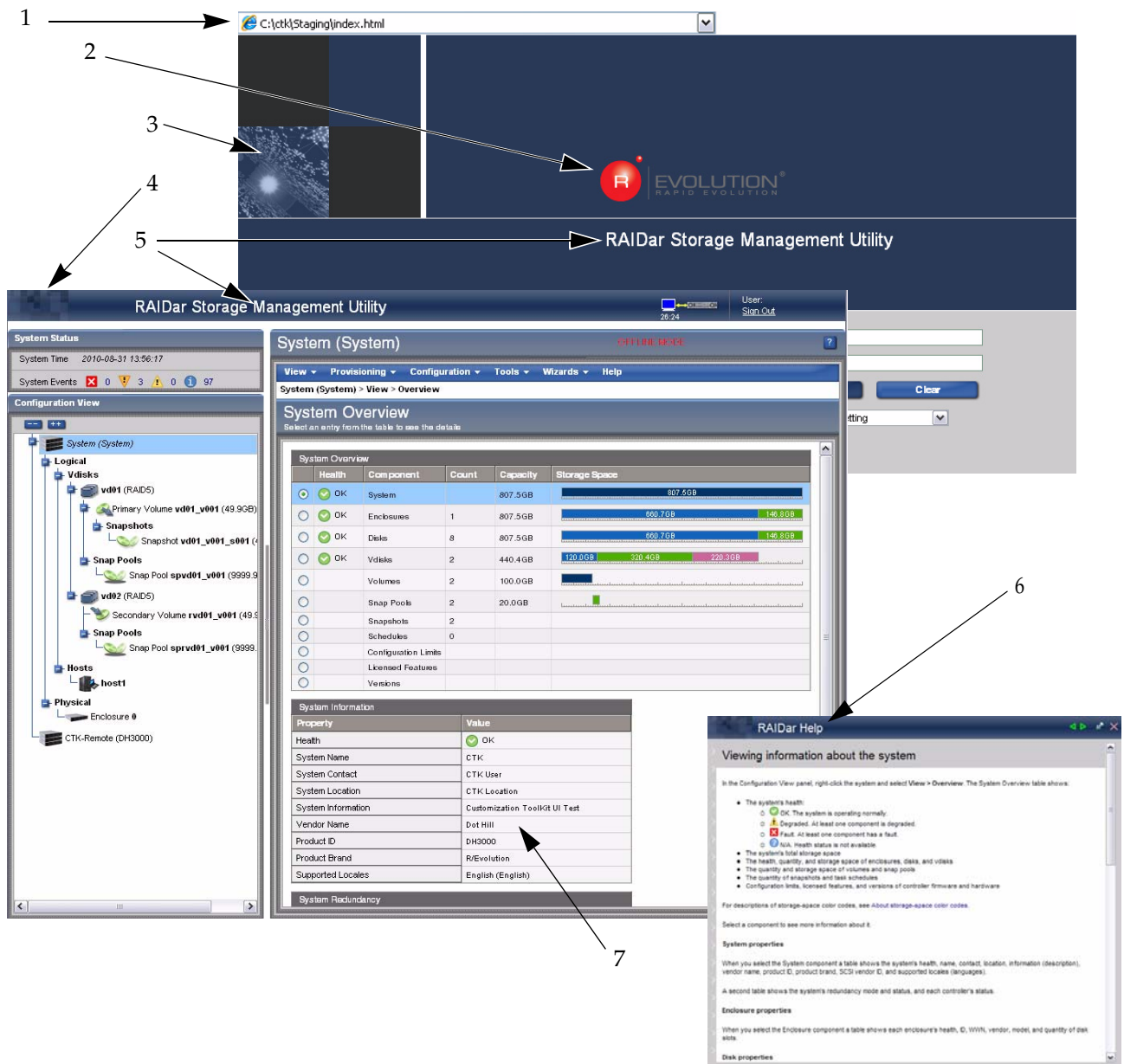


Figure 1 Tier One

Table 4 Tier One callouts

Callout	Description	Editable file and variable	Comments
1	Favorites icon	<code>favicon.ico</code>	Displays in the address bar of the browser window, and on tab in a tabbed display. This icon is visible only when the page is served to the browser.
2	Application or company logo	<code>signin_logo.png</code>	May be sized 100–300px wide, 50-100px high
3	Application banner image	<code>signin_image.png</code>	Appears on sign-in screen only. Size 100px wide by 100px high.
4	Smaller application or company logo	<code>masthead_logo.png</code>	Size 76px wide by 39px high. Usually a smaller version of the application or company banner on the sign-in page.
5	Application name	<code>brandInfo.ini</code> <i>applicationTitle</i>	See Editable text files on page 25 for important information about editing text values.
6	Abbreviated application name in Help	<code>brandInfo.ini</code> <i>applicationTitleAbbrev</i>	
7	System overview information such as vendor and product names	<code>brandInfo.ini</code> <i>vendor-name</i> <i>product-id</i> <i>product-brand</i>	

Tier Two customization

Figure 2 and Table 5 show commonly customized Tier Two elements on the sign-in and main pages.

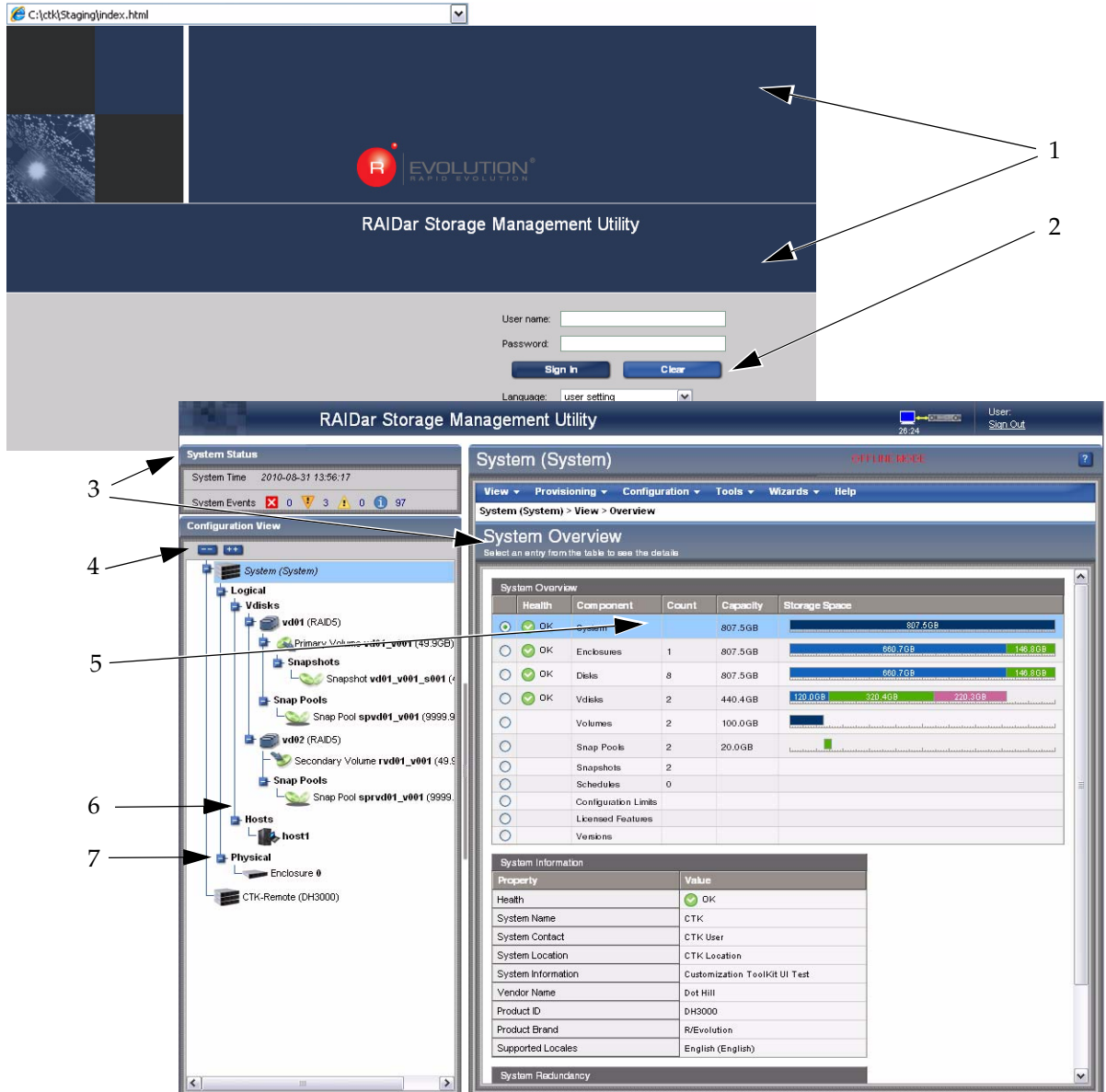


Figure 2 Tier Two

Table 5 Tier Two callouts

Callout	Description	Editable file and variable
1	Sign-in banner color	1-CSSColors.tag <i>BrandMainColor</i>
2	Buttons	images/buttons/ <i>ButtonName</i> .png
3	Pane banners	bartitle.png bartitle_large.png overviewtitle.png
4	Tree expand all, collapse all buttons	images/CE_Button*.png

Table 5 Tier Two callouts (continued)

Callout	Description	Editable file and variable
5	Selection highlighting	1-CSSColors.tag <i>SelectColor</i>
6	Tree trunk and branches	
7	Tree show/hide controls	

Tier Three customization

Figure 3 and Table 6 show commonly customized Tier Three elements on the main page.

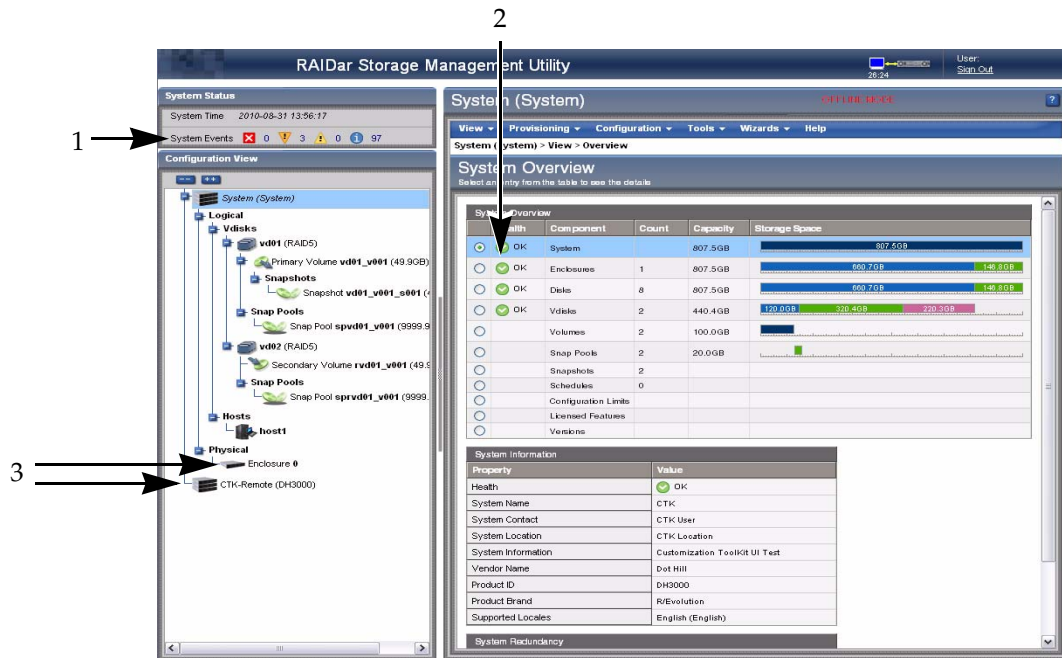


Figure 3 Tier Three

Table 6 Tier Three callouts

Callout	Description	Editable file	Comments
1	Event icons	status_state_icon[_small].png	Size icons to 15px wide by 15px high
2	Health icons	status_state_icon[_small].png	Size small icons to 9px wide by 9px high State represents the differing conditions. See Customizing buttons and tabs on page 18.
3	Component icons	Files in the tree subdirectory that do not begin with tree- or tv-	Size icons to 29px wide by 20px high

Editable text files

These text files control display and connection information, and control colors used in the application.

Table 7 Editable values in `brandInfo.ini`

Property	Value use	Visible in
vendor-name	Vendor name displayed in System Information	WBI, CLI
product-id	Product ID displayed in System Information	WBI, CLI
product-brand	Product brand displayed in System Information	WBI, CLI
scsi-product-id	SCSI IDs must be qualified. Host access may fail if the SCSI IDs are changed to an unqualified ID. SCSI IDs are controlled by T10, a subcommittee of the InterNational Committee on Information Technology Standards (INCITS).	Hidden. See Determining what level of customization is appropriate on page 8 for more information.
scsi-vendor-id		
applicationTitle	Title displayed in application banner	WBI, CLI
applicationTitleAbbrev	Abbreviated title displayed in application Help	WBI Help
triallicensing	Controls the availability of temporary licensing. Value must be set to <code>true</code> or <code>false</code> . See Signing in to RAIDar on page 13 for more information.	WBI

Table 8 Editable values in `1_CSSColors.tag`

Color Palette Section	Usage
Theme Color	These colors are used in the application banner
General Functional Colors	Colors used in common functionality such as selections, table rows, and text colors
Application Specific Colors	Colors used in specific application controls or displays in the applications. Names are descriptive of functionality.

All customizable WBI images

This section lists all elements that might be changed, by Usage (the general functional location of the image).

Table 9 Throughout



Image	Description	File	Width	Height
	Primary tab background	<code>tabs/LargeBar.png</code>	8	32
	Primary tab right background, disabled	<code>tabs/LargeDisabled.png</code>	398	32

Table 9 Throughout (continued)



















Image	Description	File	Width	Height
	Primary tab left background, disabled	tabs/LargeDisabledLeft.png	8	32
	Primary tab right background, normal	tabs/LargeNormal.png	398	32
	Primary tab left background, normal	tabs/LargeNormalLeft.png	8	32
	Primary tab right background, emphasized	tabs/LargeEmph.png	300	24
	Primary tab left background, emphasized	tabs/LargeEmphLeft.png	8	24
	Primary tab right background, hover	tabs/LargeOver.png	398	32
	Primary tab left background, hover	tabs/LargeOverLeft.png	8	32
	Primary tab right background, selected	tabs/LargeSelected.png	398	32
	Primary tab left background, selected	tabs/LargeSelectedLeft.png	8	32
	Secondary Tabs background	tabs/MediumBar.png	8	26
	Secondary tab right background, disabled	tabs/MediumDisabled.png	398	26
	Secondary tab left background, disabled	tabs/MediumDisabledLeft.png	8	26
	Secondary tab right background, normal	tabs/MediumNormal.png	398	26
	Secondary tab left background, normal	tabs/MediumNormalLeft.png	8	26
	Secondary tab right background, emphasized	tabs/MediumEmph.png	300	22
	Secondary tab left background, emphasized	tabs/MediumEmphLeft.png	8	22
	Secondary tab right background, hover	tabs/MediumOver.png	398	26
	Secondary tab left background, hover	tabs/MediumOverLeft.png	8	26

Table 9 Throughout (continued)



















Image	Description	File	Width	Height
	Secondary tab right background, selected	tabs/MediumSelected.png	398	26
	Secondary tab left background, selected	tabs/MediumSelectedLeft.png	8	26
	Tertiary Tabs background	tabs/SmallBar.png	8	18
	Tertiary tab right background, disabled	tabs/SmallDisabled.png	398	18
	Tertiary tab left background, disabled	tabs/SmallDisabledLeft.png	8	18
	Tertiary tab right background, normal	tabs/SmallNormal.png	398	18
	Tertiary tab left background, normal	tabs/SmallNormalLeft.png	8	18
	Tertiary tab right background, emphasized	tabs/SmallEmph.png	300	20
	Tertiary tab left background, emphasized	tabs/SmallEmphLeft.png	8	20
	Tertiary tab right background, hover	tabs/SmallOver.png	398	18
	Tertiary tab left background, hover	tabs/SmallOverLeft.png	8	18
	Tertiary tab right background, selected	tabs/SmallSelected.png	398	18
	Tertiary tab left background, selected	tabs/SmallSelectedLeft.png	8	18
	Small button right background, Disabled	buttons/SmallDisabled.png	301	15
	Small button left background, Disabled	buttons/SmallDisabledLeft.png	6	15
	Small button right background, Normal	buttons/SmallNormal.png	301	15
	Small button left background, Normal	buttons/SmallNormalLeft.png	6	15
	Small button right background, Emphasized	buttons/SmallEmph.png	301	15

Table 9 Throughout (continued)



















Image	Description	File	Width	Height
	Small button left background, Emphasized	buttons/SmallEmphLeft.png	6	15
	Small button right background, Hover	buttons/SmallOver.png	301	15
	Small button left background, Hover	buttons/SmallOverLeft.png	6	15
	Small button right background, Down	buttons/SmallDown.png	301	15
	Small button left background, Down	buttons/SmallDownLeft.png	6	15
	Medium button right background, Disabled	buttons/MediumDisabled.png	303	20
	Medium button left background, Disabled	buttons/ MediumDisabledLeft.png	6	20
	Medium button right background, Normal	buttons/MediumNormal.png	303	20
	Medium button left background, Normal	buttons/ MediumNormalLeft.png	6	20
	Medium button right background, Emphasized	buttons/MediumEmph.png	303	20
	Medium button left background, Emphasized	buttons/MediumEmphLeft.png	6	20
	Medium button right background, Hover	buttons/MediumOver.png	303	20
	Medium button left background, Hover	buttons/MediumOverLeft.png	6	20
	Medium button right background, Down	buttons/MediumDown.png	303	20
	Medium button left background, Down	buttons/MediumDownLeft.png	6	20
	Large button right background, Disabled	buttons/LargeDisabled.png	303	22
	Large button left background, Disabled	buttons/ LargeDisabledLeft.png	6	22
	Large button right background, Normal	buttons/LargeNormal.png	303	22

Table 9 Throughout (continued)








Image	Description	File	Width	Height
	Large button left background, Normal	buttons/ LargeNormalLeft.png	6	22
	Large button right background, Emphasized	buttons/LargeEmph.png	303	22
	Large button left background, Emphasized	buttons/LargeEmphLeft.png	6	22
	Large button right background, Hover	buttons/LargeOver.png	303	22
	Large button left background, Hover	buttons/LargeOverLeft.png	6	22
	Large button right background, Down	buttons/LargeDown.png	303	22
	Large button left background, Down	buttons/LargeDownLeft.png	6	22

Table 10 Sign-in page



Image	Description	File	Width	Height
	Graphic for lower left checkerboard square	signin_image.png	100	100
	Company logo, large	signin_logo.png	100 to 300	50 to 100

Table 11 Banner



Image	Description	File	Width	Height
	Background for application banner, tiled horizontally	mastheadBG.png	40	40
	Logo overlaid on application banner at left	masthead_logo.png	76	39

Table 12 Configuration View panel



Image	Description	File	Width	Height
	Expand/Collapse buttons, Disabled	buttons/ CButtonDisabledLeft.png	6	13
	Expand/Collapse buttons, Normal	buttons/ CButtonNormLeft.png	6	13

Table 12 Configuration View panel (continued)














Image	Description	File	Width	Height
	Expand/Collapse buttons, Emphasized	buttons/ CButtonEmphLeft.png	6	13
	Expand/Collapse buttons, Hover	buttons/ CButtonOverLeft.png	6	13
	Expand/Collapse buttons, Down	buttons/ CButtonDownLeft.png	6	13
	Collapse, Disabled	buttons/ CCButtonDisabled.png	24	13
	Collapse, Normal	buttons/CCButtonNorm.png	24	13
	Collapse, Emphasized	buttons/CCButtonEmph.png	24	13
	Collapse, Hover	buttons/CCButtonOver.png	24	13
	Collapse, Down	buttons/CCButtonDown.png	24	13
	Expand, Disabled	buttons/ CEButtonDisabled.png	24	13
	Expand, Normal	buttons/CEButtonNorm.png	24	13
	Expand, Emphasized	buttons/CEButtonEmph.png	24	13
	Expand button, Hover	buttons/CEButtonOver.png	24	13
	Expand button, Down	buttons/CEButtonDown.png	24	13

Table 13 Configuration View tree




Image	Description	File	Width	Height
	Vdisk (used for all, not just SAS)	tree/arrayasas.png	29	20
	Enclosure	tree/enclosure.png	29	20
	Host	tree/initiator.png	29	20

Table 13 Configuration View tree (continued)










Image	Description	File	Width	Height
	System	tree/system.png	29	20
	Tree item	tree/tv-item.png	16	22
	Tree last item	tree/tv-item-last.png	16	22
	Tree collapsible item	tree/tv-collapsible.png	16	22
	Tree last collapsible item	tree/tv-collapsible-last.png	16	22
	Tree expandable item	tree/tv-expandable.png	16	22
	Tree last expandable item	tree/tv-expandable-last.png	16	22
	Vertical navigation line	tree/tv-vline.png	16	22
	Volume	tree/vol.png	29	20

Table 14 Dialog








Image	Description	File	Width	Height
	Action success	success.png	46	46
	Informational message	message.png	46	46
	Warning	warning.png	46	46
	Error	error.png	46	46
	Action failure	failure.png	46	46
	Confirm	confirm.png	46	46
	Animated progress/working bar	progress_bar_small.gif	150	10

Table 14 Dialog (continued)



Image	Description	File	Width	Height
	Dialog close	dialog/ dialog-titlebar-close.png	20	20
	Dialog close, hover	dialog/dialog-titlebar-close-hover.png	20	20

Table 15 Status













Image	Description	File	Width	Height
	Severity, major	status_major_icon.png	15	15
	Severity, major	status_major_icon_small.png	10	10
	Severity, informational	status_informational_icon.png	15	15
	Severity, informational	status_informational_icon_small.png	10	10
	Bad & event severity, critical	status_critical_icon.png	15	15
	Bad & event severity, critical	status_critical_icon_small.png	10	10
	Degraded & event severity, minor	status_minor_icon.png	15	15
	Degraded & event severity, minor	status_minor_icon_small.png	10	10
	Normal	status_normal_icon.png	15	15
	Normal	status_normal_icon_small.png	10	10
	Unknown	status_unknown_icon.png	15	15
	Unknown	status_unknown_icon_small.png	10	10

Table 16 All panels


Image	Description	File	Width	Height
	Panel background, tiled (makes graphic border)	DarkGrayPanel.png	8	6

Table 17 Panel content


Image	Description	File	Width	Height
	Background for right hand content panel title bar	overviewtitle.png	2000	46

Table 18 Panel left


Image	Description	File	Width	Height
	Background for left hand panel title bars	bartitle.png	800	24

Table 19 Panel right




Image	Description	File	Width	Height
	Background for right hand panel title bar	bartitle_large.png	2000	36
	Help/button	helpIcon.png	18	18
	Animated progress/working bar	progress_bar_small.gif	150	10

Table 20 Panel separator


Image	Description	File	Width	Height
	Drag handle for resizing left and right panels horizontally	e_clear_resize.png	6	200

Table 21 Panel status


Image	Description	File	Width	Height
	Status panel background, tiled	grey_panel_bg.gif	20	20

Table 22 Help

















Image	Description	File	Width	Height
	Help navigation	helpNav.png	15	15
	Help close	helpclose.png	15	15
	Help close, hover	helpclose.gif	15	15
	Help next	helpnext.png	15	15
	Help previous	helpprev.png	15	15
	Help pin	helppin-up2.png	15	15
	Help pinned	helppin-down2.png	13	15
	Left help divider	helpDividerLeft.gif	10	30
	Left help divider, hover	helpDividerLeftHover.gif	10	30
	Right help divider	helpDividerRight.gif	10	30
	Right help divider, hover	helpDividerRightHover.gif	10	30

Table 23 Link

Image	Description	File	Width	Height
	Link up	linkConnectedSysUp.png	72	36
	Link connected, system down	linkConnectedSysDown.png	72	36
	Link down	linkDown.png	72	36
	Link disconnected, system up	linkDisconnectedSysUp.png	72	36
	Link disconnected, system down	linkDisconnectedSysDown.png	72	36

