



How-to Guide
SAP NetWeaver '04
SAP Enterprise Portal 6.0

How To... Maximize the Accessibility of the High Contrast Theme

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Package Stack 1)

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CONTENTS

1	SCENARIO	5
2	WHAT IS A HIGH CONTRAST COLOR SCHEME?.....	5
3	THE STEP-BY-STEP SOLUTION	6
3.1	Creating a theme using the Theme Editor	6
3.2	Maximizing the Accessibility of the SAP High Contrast Theme.....	6
3.2.1	Reducing background glare by changing portal body background from white to a light color.	6
3.2.2	Increasing legibility by changing the standard font to a bolder typeface	9
3.2.3	Changing the row selection indicator image	10
3.2.4	Special settings for the Theme „SAP High Contrast Black“	11
3.3	Creating Frameworkpages, Portal Desktops and Portal Display Rules	14

1 Scenario

The SAP Enterprise Portal supplies a fairly easy way for visually impaired users to switch to a high contrast theme. All they need to do is just click on the "Personalize" link and select "SAP High Contrast" or "SAP High Contrast Black" in the Portal Theme iView. It enables enterprises to support their users with additional customized high contrast themes.

The SAP High Contrast Theme was designed for users with low sight to offer maximum contrast between text and background. The theme SAP High Contrast Black allows the usage of a few additional strong, saturated colors.

With the Theme Editor, customers can create additional high contrast themes, based on specific requests from visually challenged users, and make these theme variants available to their users via the "personalize" link.

Normally it could be sufficient, that a portal administrator modifies the delivered High Contrast template in the Theme Editor, replaces the enterprise logo, and saves it as a customer design which is then made available to users.

But for a number of high contrast users it may be necessary to maximize the accessibility of the High Contrast Theme by changing some special theme parameter of the user interface elements.

2 What is a high contrast color scheme?

The high contrast color scheme has been an integrated accessibility feature of standard operating systems' graphical interfaces.

Since the portal is a web product, running in a browser, it is more difficult to give users direct and individual access to color customization. While the display font sizes can be easily customized through the browser's view options, there is no direct way for the browser to let users adjust color in web interfaces. Theoretically, you can "customize" a regular web site by creating your own CSS containing suitable colors, and tell your browser to use it, overriding the site's default color attributes. In reality, though, most users don't have the time or expertise to do so. Even if they do, customers will hardly want regular users to change the look of their enterprise portal individually.

For people with normal vision, color may be a matter of preference. For users with visual impairments, however, it is a critical factor deciding whether or not they can use a software or web site at all. In order to read, they require a high contrast between text and the background.

It is not enough to offer only one high contrast setting, as different users need different high contrast settings. Some may even need a particular scheme, such as white text on a black background, as otherwise they have the impression that the background "bleeds", causing the foreground text to look less clear-cut. White on black, black on white, and yellow on blue are the most widespread color schemes used to achieve higher contrast.

3 The Step-By-Step Solution

3.1 Creating a theme using the Theme Editor

You use the Theme Editor to develop one or more themes for your portal users. Your own themes are always based on one of the theme templates provided by SAP. You use the theme templates SAP High Contrast and SAP High Contrast Black if you intend to create themes for users with poor sight to offer maximum contrast between text and background.

You find the Theme Editor in the System Administration Role of SAP Enterprise Portal. Choose *Portal Display -> Theme Editor*. You can create a new theme based on the theme templates “SAP High Contrast” or “SAP High Contrast Black” and save your themes under a name and an ID. For detailed information on the Theme Editor, such as how to create themes, see the SAP Help Portal at help.sap.com/nw04. Choose *SAP NetWeaver -> People Integration -> Portal -> Administration Guide -> System Administration -> Portal Display -> Theme Editor*.

We recommend that you edit the high contrast theme only upon specific user request. For each set of changes requested, create a separate copy of the high contrast template and edit only the required styles. Ask those requesting the change to test the results. In time, you will have a series of high contrast theme variants, so that users can choose the one that best suits their needs.

3.2 Maximizing the Accessibility of the SAP High Contrast Theme

The following settings will make sense for a number of high-contrast users:

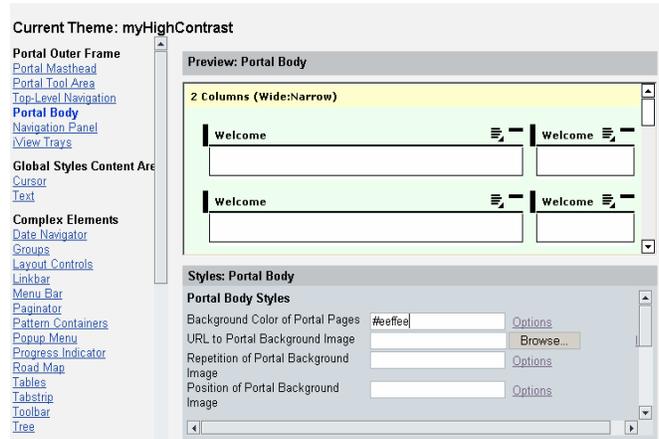
- Reduce background glare by changing the portal body background from white to a light color.
- Increase legibility by changing the standard font to a bolder typeface.
- In the table, choose a selection indicator image that can be distinguished without using color.

3.2.1 Reducing background glare by changing portal body background from white to a light color.

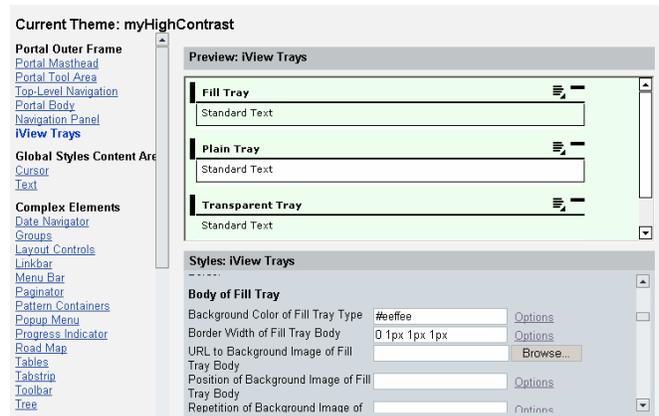
Some high contrast users prefer a white background, while others with sight deficiencies find it hard to read against a white background. The second group will probably prefer to have a slightly subdued, light color tone as text background.

Change the parameters of the following user interface elements of your theme:

1. In the left navigation area click on the UI element *Portal Outer Frame* -> *Portal Body* and change the parameter **Portal Body Styles:** Background Color of Portal Pages to a new color (for example #eeffee). **Note:** Every change will immediately be visible in the preview area if you choose ENTER or click somewhere else on the page. It is not necessary to save every time you change a parameter.

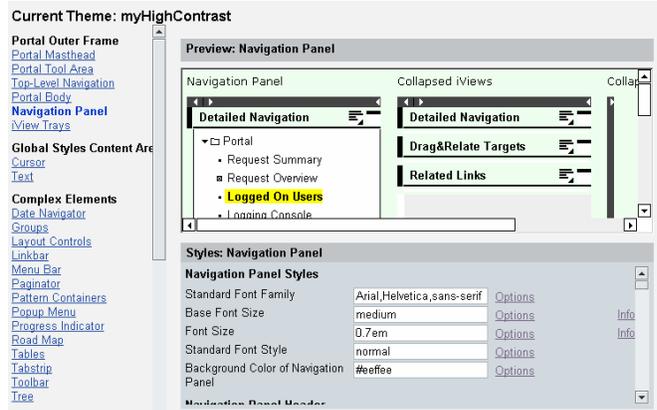


2. In the left navigation area click *Portal Outer Frame* -> *iView Trays* and change the parameter **Body of Fill Tray:** Background Color of Fill Tray Type to a new color (for example #eeffee).



3. In the left navigation area click on *Portal Outer Frame* -> *Navigation Panel* and change the following parameters to a new color:

- **Navigation Panel Styles:**
Background Color of Navigation Panel
- **Tray Body of Navigation Panel:**
Background Color of Tray Body
- **Detailed Navigation List:**
Background Color of List
- **Tray Footer of Navigation Panel:**
Background Color of Tray Footer
- **Navigation Panel Footer:**
Background Color of Footer

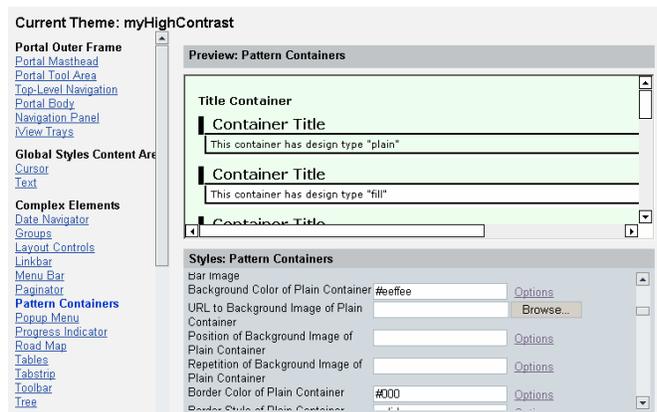


4. In the left navigation area click on *Screen Areas* -> *Application* and change parameter **Background Color of Application** to a new color.



5. In the left navigation area click on *Complex Elements* -> *Pattern Containers* and change the following parameters to a new color:

- **Pattern Container Body:**
Background Color of Plain Container
- **Pattern Container Body:**
Background Color of Filled Container

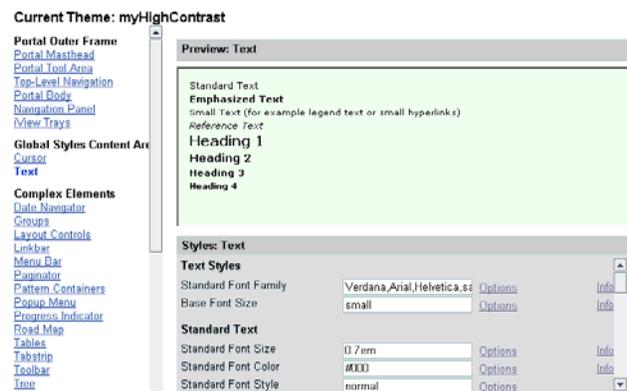


Additionally you can also change the background color of the following elements to a non-white color:

UI Element	Parameter to be changed
Complex Elements -> Tabstrip	Unselected Tabs: Background Color of Unselected Tab; Tab Page: Background Color of Tab Page Content
Complex Elements -> Groups	Background Colors: Background Colors A, B, C and D Please note that you should not use the same color as in the portal body background, because it would make them disappear in the background. Use a different shade which is slightly lighter or darker than in the body background.
Complex Elements -> Tables	Standard Table Cells: Background Color of Standard Table Cell; Alternating Table Cells: Background Color of Alternating Table Cells; Please note that some users might prefer to increase the legibility of cell entries by giving up all or some semantic cell background colors, because high contrast users have difficulties to differentiate between subdued color tones anyway. You could replace the less important colors with the standard cell color, and use only a few important custom semantic colors. Your user may be able to propose some background colors which work better for him/her.
Complex Elements -> Tree	Level Colors: Background Color of 1 st t the 4 th level

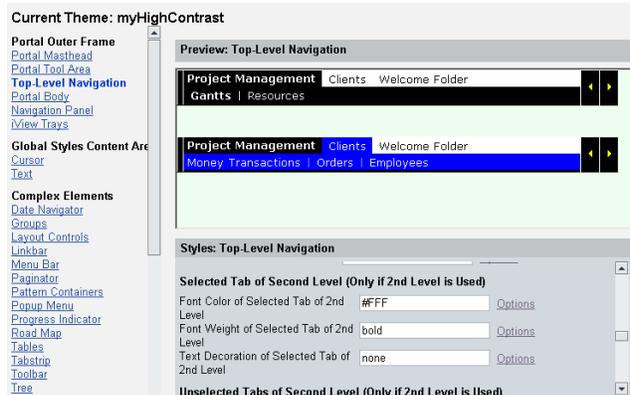
3.2.2 Increasing legibility by changing the standard font to a bolder typeface

1. In the left navigation area click on the UI element *Global Styles Content Area -> Text* and change **Text Styles: Standard Font Family**. Add a new typeface at the beginning of the list and choose a font family which is available on your users machine.



2. In the left navigation area click on UI element *Portal Outer Frame* -> *Top-Level Navigation* and change the following parameters:

- **Unselected Tabs of First Level:** change *Font Weight of Unselected Tabs* to bold.
- **Selected Tab of Second Level (Only if 2nd Level is Used):** change *Text Decoration of Selected Tab of 2nd Level* to underline.
- **Selected Tab of Second Level (Only if 2nd Level is Used):** change *Font Color of Selected Tab of 2nd Level* to the same color as in the hover.
- **Unselected Tabs of Second Level (Only if 2nd Level is Used):** change *Font Weight of Unselected Tab of 2nd Level* to bold.



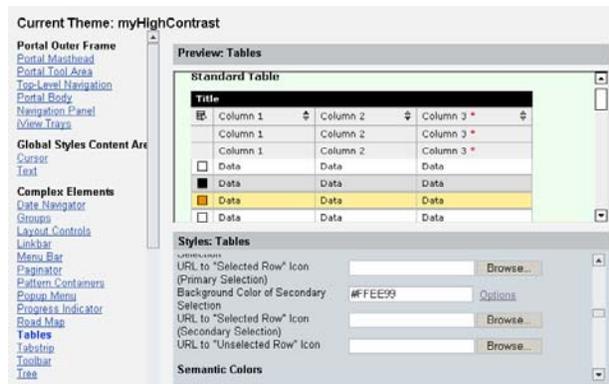
Please note: If you change the standard font to a bolder typeface, emphasized text will no longer be bolder than standard text.

3.2.3 Changing the row selection indicator image

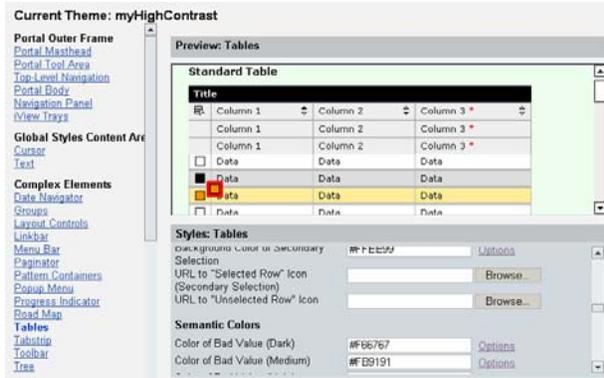
The row selection indicator image should be changed in table from color key to a shape which can be seen well without using color difference. For example, instead of an orange square, you could use a black and white square with a cross-sign or a tick mark inside the square.

In the left navigation area click on the UI element *Complex Elements* -> *Tables* and exchange the icon in **Selected Cells:** URL to "Selected Row" Icon (Secondary Selection) by performing the following steps:

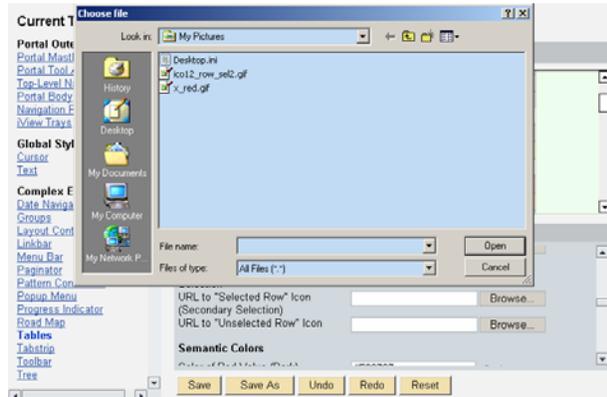
1. Hold your mouse over this entry in the style area, the image will be highlighted in the preview area.



- Right-click the row indicator image in the preview area. A copy of the image with a strong red border around it will appear. To download the image right-click the red-bordered image copy, choose “Save picture as” and save it to your computer.



- Make changes to the image using a graphical programme and save it under any name you prefer. Upload the new image to your theme by using the browse button next to the entry “URL to “Selected Row” Icon (Secondary Selection)”.



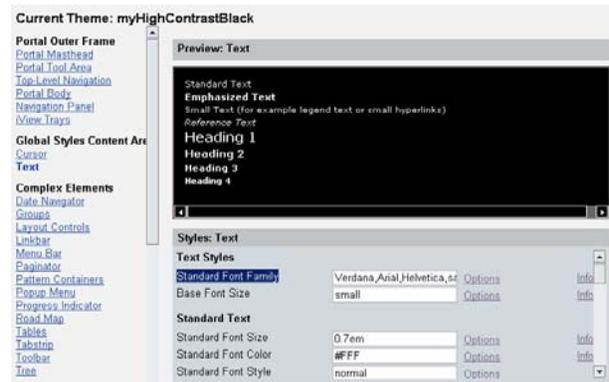
3.2.4 Special settings for the Theme „SAP High Contrast Black“

“SAP High Contrast Black” is not a mere inversion of the “SAP High Contrast Theme”, which is mainly black and white. “SAP High Contrast Black” uses a number of bright colors for borders, text etc. If you plan to change the background color, please check whether all font and border colors which appear against the new background color still work well. You may need to change some of those, too.

Do not use bright or light colors as background. For example a yellow background will never allow white text so be seen well.

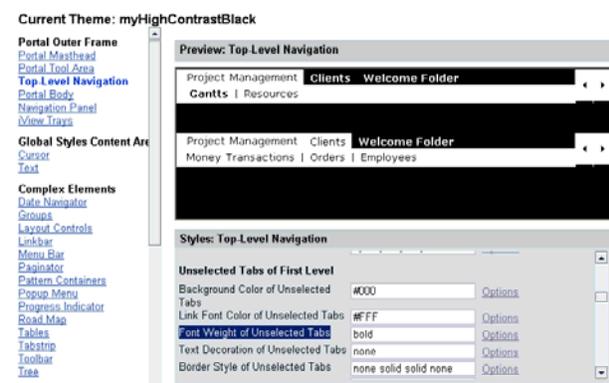
3.2.4.1 Changing the Standard Font to a bolder Typeface

1. In the left navigation area click on *Global Styles Content Area -> Text* and change the parameter **Text Styles: Standard Font Family**. Add your new typeface at the beginning of the list. Choose a font family which is available on your users machine.



2. In the left navigation area click on *Outer Frame -> Top-Level Navigation* and change the following parameters:

- **Unselected Tabs of First Level:** change *Font Weight of Unselected Tabs* to bold.
- **Selected Tab of Second Level (Only if 2nd Level is Used):** change *Text Decoration of Selected Tab of 2nd Level* to underline.
- **Selected Tab of Second Level (Only if 2nd Level is Used):** change *Font Color of Selected Tab of 2nd Level* to the same color as in the hover.
- **Unselected Tabs of Second Level (Only if 2nd Level is Used):** change *Font Weight of Unselected Tab of 2nd Level* to bold.



3.2.4.2 Changing the color of standard text

In the left navigation area click on *Global Styles Content Area -> Text* and change **Standard Text: Standard Font Color** to a light, bright color.

Before you change the font color, check all elements to find out the present font colors which are currently used in the HCB theme for semantic reasons. For example, look for disabled text color, invalid input text, link colors etc. in the sections **Simple Elements/Labels** and fields as well as **Links**, see also **Navigation Panel/Drag/Related Link**. Avoid using those or very similar colors for Standard Text.

After changing the standard text color, or any other font color, check whether it works against all possible background colors, especially in the Table, iView Tray and Pattern containers, in Groups, on Tabstrips, disabled input fields or table cells, selected cells, pop-up menu items, Link Bar, Date navigator.

3.3 Creating Frameworkpages, Portal Desktops and Portal Display Rules

Defining one or several “High Contrast Themes” is only one step in making these themes available to the portal user.

A portal theme is only relevant for the optical appearance of the control elements, font size, colors and contrast of the user interface elements of a portal desktop. A portal theme does **not** define the layout, structure or contents of a portal desktop. This is defined by the default framework page. Neither the framework page nor the portal theme are directly assigned to a user. Combinations of framework pages and portal themes must be defined and this combinations result in portal desktops.

When a user logs on to the portal, the portal display he or she receives is an integrated portal desktop which is a combination of four components: portal themes, frameworkpage, portal desktop and portal display rule.

Portal desktops must be assigned to users according to portal display rules. Display Rules are sets of conditions defined by a portal administrator determining which portal desktops (a portal object combining selected framework pages with portal themes) are assigned to end users at runtime in SAP Enterprise Portal.

In the Portal personalization portal users can choose among different portal themes to personalize the look and feel of their portal desktop.

For detailed information on the connection of portal themes with frameworkpages, portal desktops and portal display rules see the SAP Help Portal at help.sap.com/nw04. Choose the path *SAP NetWeaver -> People Integration -> Portal -> Administration Guide -> System Administration -> Portal Display*.