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Prerelease Notes

Oracle's PeopleSoft PeopleTools 8.54

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Prerelease Notes for PeopleSoft PeopleTools 8.54

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Introduction

This section discusses:

- Purpose of this document.
- Release information publications.

Purpose of This Document

The Prerelease Notes document provides an overview of the new features and enhancements planned for Oracle's PeopleSoft PeopleTools 8.54 release. It is a road map intended to help you assess the business benefits of PeopleSoft PeopleTools 8.54 and to plan your IT projects and investments.

Please note that in the final release it is possible that features described in this document may become part of different applications or have different product names than those cited in the document. In addition, the Prerelease Notes do not contain a comprehensive description of all the features and changes that will become part of the upcoming release. The Release Notes document, available when the release becomes generally available, contains the comprehensive set of descriptions for the features and changes available in the final product.

This document contains intended developments and functionalities and is not meant to be binding on Oracle to any particular course of business, product strategy, or development. Please note that this document is subject to change by Oracle at any time without notice.

Note. Only those products that have significant enhancements are mentioned in this release document.

Release Information Publications

This section discusses the following publications and tools that provide in-depth technical and functional information about a PeopleTools release:

- Release Value Proposition.
- Prerelease Notes.
- Release Notes.
- Cumulative Feature Overview Tool.

Release Value Proposition

The Release Value Proposition provides more functional details than the statement of direction, identifies major enhancements, and articulates the expected business benefit. This document is designed to help you to determine whether new product features might warrant upgrading from an old release or embarking on a new implementation. With this information, managers will be able to initiate preliminary budget planning and begin putting together a project team to further evaluate specific products.

The Release Value Proposition for PeopleTools 8.54 document (ID 1664634.1) has been published and is available on the Oracle support web site.

See

[PeopleTools 8.54 Release Value Proposition](#)

Prerelease Notes

Prerelease Notes provide more functional and technical details than the release value proposition. This document describes how each enhancement functions within the context of the greater business process. This added level of detail should enable project teams to answer the following questions:

- What out-of-the-box functionality will change?
- What customizations may be affected?
- How will an upgrade or new implementation affect other systems?
- How will these changes affect the organization?

After the project team has reviewed and analyzed the prerelease notes, business decision makers should be in the position to determine whether to allocate budget and initiate implementation plans.

Release Notes

Release Notes are published at general availability (GA) and validate the final scope of the release. The release notes discuss the features and enhancements that are available with the GA release of each product, describing the finalized functional and technical details that will enable project teams to confirm budgets and complete implementation plans.

Cumulative Feature Overview Tool

The Cumulative Feature Overview Tool helps you plan your upgrades by providing concise descriptions of new and enhanced solutions and functionality that have become available between your starting and target releases. You simply identify the products that you own, your existing release, and your target implementation release. With a single click, the tool quickly produces a customized set of high-level, concise descriptions of features that have been developed between your starting and target releases. In an easy to use web-based format, you can easily manipulate and sort the results any way you wish, download to Microsoft Excel, or copy the content into other implementation planning documents.

See

[Cumulative Feature Overview](#)

Before You Begin

Before you upgrade to PeopleTools 8.54, always make sure that you have read any updates to the following:

- PeopleSoft upgrade documentation.
- PeopleSoft installation documentation.
- Certification information on My Oracle Support.
- Operating System, RDBMS & Additional Component Patches Required for Installation on PeopleTools 8.54.

Platform Support Enhancements

This section provides a summary of added and changed product support.

Summary of Added and Changed Product Support

The following table lists noteworthy changes to key infrastructure components planned for PeopleTools 8.54. While the data accurately describes our intent as of the release of this document, specific component support plans could change before PeopleTools 8.54 is released. Always check My Oracle Support for updates to this information. Keep in mind that the discontinuation of support for a component is generally due to the end of the vendor's mainstream support for the product.

Component	Added	Discontinued
Server Operating System	Oracle Linux 6 (64-bit) Windows Server 2012, 2012 R2 zOS 2.1	Windows Server 2008 (R1) z/OS 1.11
Client Operating System	Windows 8.1	Windows 7 (32-bit)
RDBMS	Oracle 12c DB2 LUW 10.1, 10.5 DB2 z/OS 11 Informix 12.1 MSS 2014	Oracle 10.2.0.5, 11.2.0.3 DB2 LUW 9.5 MSS 2008
Web Server	WebLogic 12.1.2 WebSphere 8.5.5	WebLogic 10.3.6
Browser	Chrome - current level at 8.54 GA Firefox - 24 (extended support release) & current level at 8.54 GA Internet Explorer 11 Safari 6, 7 (for Mac) Safari for iPad iOS 6, 7	IE 8 Firefox 17 Safari 4, 5 for Mac iOS 5
Application Server	Tuxedo 12.1.1.0 (VS2012 for Windows)	Tuxedo 11gR1
JRE	1.7 – no change	
Search	SES – 11.2.2.2 Verity – no change, 6.5.1.1	SES 11.1.2.2
COBOL	Net Express 5.1 WP9 for Windows Server 2012 IBM Enterprise COBOL for z/OS 5.1	IBM RDz 7.6, COBOL for Windows 7.6 IBM z/OS COBOL 4.1
Enterprise Manager	EM 12.1.0.1 – no change	

Component	Added	Discontinued
Crystal/BOE	Crystal 2013 BOE 4	
Office	Office 2013 64-bit	32-bit Microsoft Excel

Note. This Release Value Proposition *does not* contain a comprehensive list of Oracle's support policy, nor is it intended to replace the information in the certification database on My Oracle Support. The information contained in the table is a snapshot of the current plans for platform support as of general availability for this release. *Always* refer to the certification database on the Certifications tab on My Oracle Support for the current and most comprehensive support information.

Development Tools Enhancements

This section covers changes and updates related to the development of PeopleSoft applications, including:

- PeopleSoft Fluid User Interface.
- Mobile Application Platform.
- 64-Bit Development Client.
- PeopleSoft Application Designer.
- PeopleSoft Search Technology.
- PeopleTools Portal Technologies.
- PeopleSoft Documents Technology.
- Application Engine.
- Global Technology.

PeopleSoft Fluid User Interface

This release represents a landmark for PeopleTools and the PeopleSoft user experience. With this release PeopleSoft introduces the PeopleSoft Fluid User Interface. Designed as a significant improvement over the PeopleSoft “classic” user interface, the PeopleSoft Fluid User Interface moves away from pixel-perfect page layout and provides greater flexibility with the enhanced use of cascading style sheets (CSS3), HTML5, and JavaScript.

PeopleSoft application fluid pages scale gracefully from large screen devices, such as laptops and desktops, to the reduced viewing space of tablets and Smartphones. Many commercial websites use a similar design model whereby the presentation and layout of information is adjusted dynamically to conform to the dimensions of the user’s device. The Fluid User Interface design approach gives developers just this type of control over the user experience. When a larger screen size (a screen with more “real estate”) is detected, the application content will adjust and conform accordingly to fill the space effectively. Similarly, if a smaller screen size is detected, non-essential information can be removed and the presentation of content will adjust to flow in a usable way.

Like PeopleSoft “classic” pages, fluid page definitions are maintained within PeopleSoft Application Designer, and the application developer will have the ability to define and apply conditional formatting appropriate to Smartphone, tablet, or large-screen devices. At runtime, PeopleTools will apply the corresponding formatting according to the device in use. An end user can interact with fluid pages using a conventional mouse and keyboard or using a touch interface, which is common on tablets and Smartphones. These new pages are device-independent and will operate on any certified device browser.

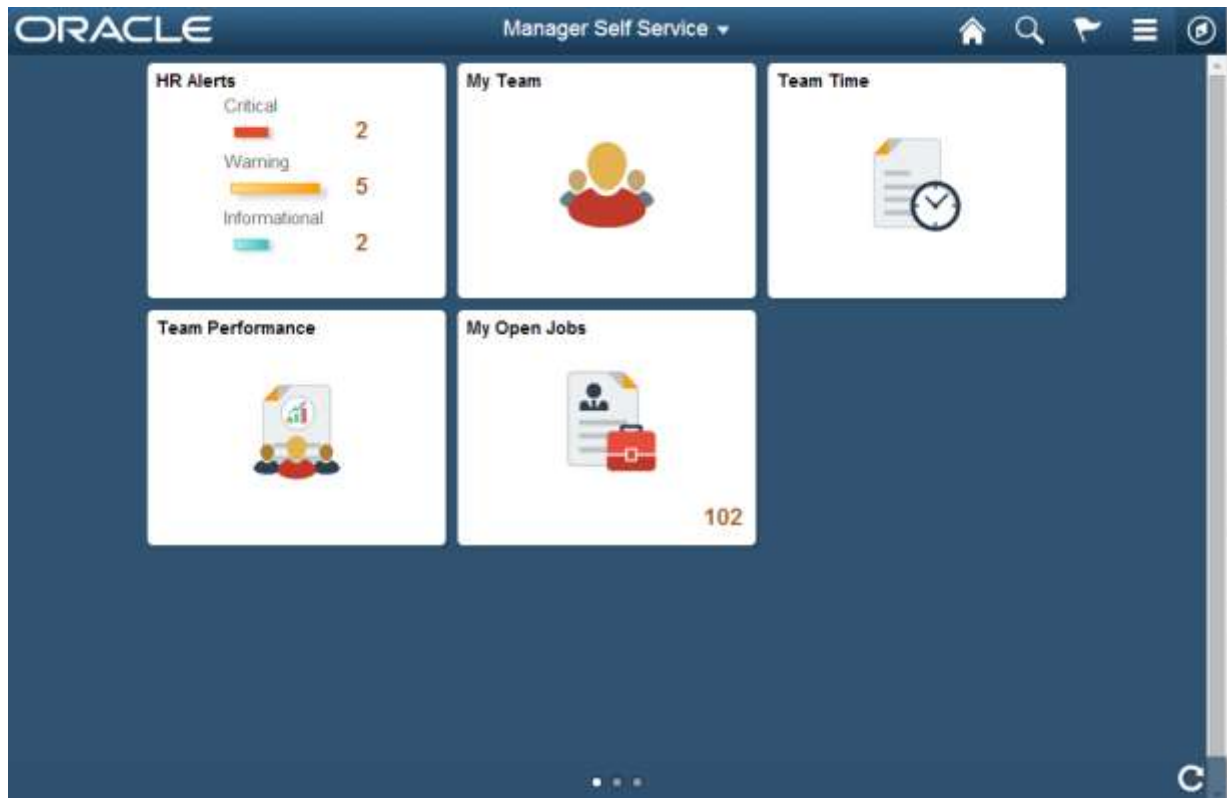
The PeopleSoft Fluid User Interface introduces a number of important new features to the application user experience:

- Fluid Homepages.
- Tiles.
- Notification Framework.
- PeopleSoft Navigation Bar.

Fluid Homepages are the fluid version of an application home page. Similar to the current portal technology, the fluid homepage is where a user arrives after logging into the system. The fluid homepage brings together information that will assist a user in understanding what's happening and what needs their attention, while providing an easy way for the user to navigate to key parts of the PeopleSoft system. A system can contain multiple fluid homepages for different uses. Customers can easily create new homepages and publish them to users, groups of users, or specific roles. End users can create their own personal homepages, where they might associate information of relevance or importance to themselves.

Fluid homepages use a new navigational structure: the tile. Tiles, also called grouplets, provide a discrete view to a segment of the PeopleSoft application. It is a structure on the homepage that will help the user navigate to a fluid page (or even a classic page), but the tile also can provide valuable information in its own right. Designed to be more than a button on a homepage, the tile leverages the ability to display notifications through the new PeopleSoft Notification Framework as well as dynamic visual content from PeopleSoft Pivot Grids or other information sources. A tile on a fluid homepage can be compared to a pagelet on a classic homepage.

The following example displays a sample fluid homepage, Manager Self Service, which contains a handful of tiles. The HR Alerts tile displays timely information to help a manager take appropriate action, while the other tiles, when pressed, allow the user to access selected business transactions, streamlined for fluid display.



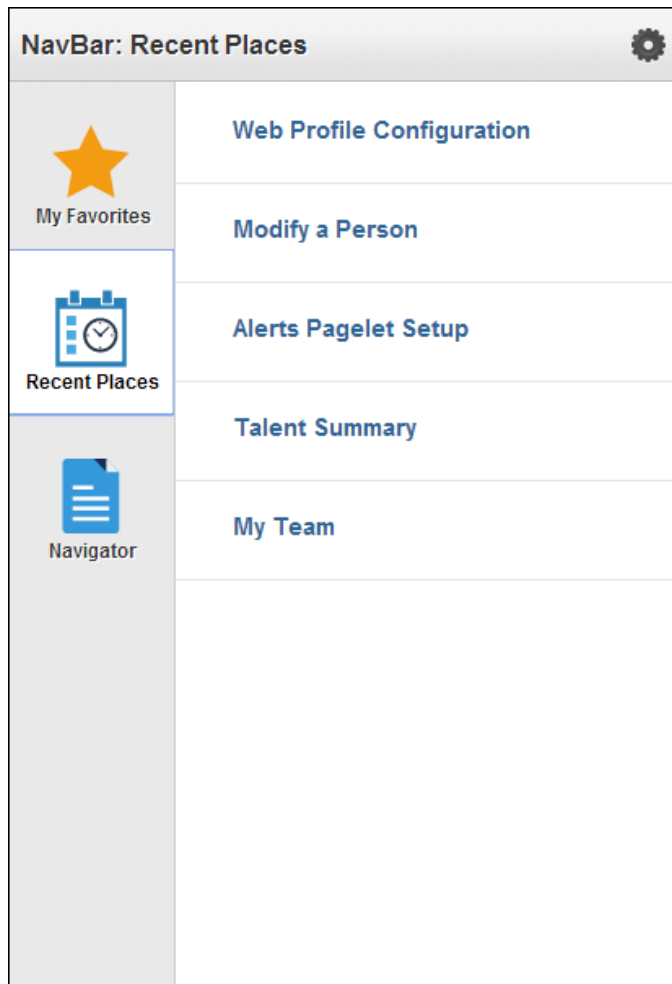
PeopleSoft Fluid User Interface – Manager Self Service homepage

The Notification Framework is a mechanism employed by PeopleTools that updates a widget in the homepage header. As data is updated within applications, the notification widget reflects a sum of all notifications from all applications represented in the home page. It shows users the number of items that need their attention and enables them to view and act on those items using the Notification Window. For example, if an application provides the number of outstanding invoices yet to be approved by the user, the Notification Framework might be used to update the count dynamically as new invoices are generated.

The new PeopleSoft Navigation Bar (also referred to as NavBar) offers faster and more intuitive navigation across the PeopleSoft application. The Navigation Bar is a new fluid structure that is always available as a dynamic window that slides out from the side of the page. On fluid-enabled systems, the PeopleSoft Navigation Bar will be available even on PeopleSoft classic pages, creating a seamless experience for users as they navigate the system.

The PeopleSoft Navigation Bar enables users to access information about other areas of the application directly and, upon selection, to navigate to those pages. It includes the entire PeopleSoft menu, user favorites, and recently used links, but also navigation tiles that will bring users to the parts of the application that are most important to them. Users can personalize the PeopleSoft Navigation Bar easily by arranging the icons or even by pinning new application pages to the bar as they work.

The following example illustrates the PeopleSoft Navigation Bar (NavBar), with the Recent Places option selected. In this case, the user can easily return to transactions with which they have been using most recently. If desired, the user might also select the My Favorites option, which displays user-defined favorites, similar to the current functionality using the Favorites menu in PeopleTools Portal. Selecting the Navigator option displays all the menus to which the user has access for traditional navigation, similar to the current functionality of the Main Menu in the PeopleTools Portal.



PeopleSoft Navigation Bar

As previously mentioned, fluid pages are designed with a view to the mobile user. Mobile devices such as tablets and Smartphones include the ability for the user to change the page orientation (by turning the device) from Portrait (tall) to Landscape (wide). A responsive page will automatically adjust to fill the space appropriately. In Portrait mode, where width is limited, a grid that would normally display multiple columns might adjust to show the information row-by-row instead. PeopleTools allows developers to define the behavior required of an application page to accommodate these types of dynamic changes.

Page designers may also elect to alter the type or nature of information that appears to the user, depending on the form factor of the device. That is, larger displays might show more associated information, related content, or analytic charts; whereas a Smartphone page might be designed to show only the information necessary to complete the steps of a transaction. PeopleTools enables an application developer to determine exactly what information will appear to a user in these scenarios.

In addition, the PeopleSoft Fluid User Interface supports device-side capabilities for mobile devices such as the embedded camera for image uploads. With PeopleTools, application developers can construct modern mobile applications and deploy them in conjunction with the deep functionality of PeopleSoft applications to create a powerful, dynamic experience for users.

If you intend to provide fluid page access to end users, system administrators will need to enable Fluid Mode for the system, which entails reviewing only a few settings in the web profile and the PeopleTools Options page. Keep in mind that fluid pages may require a higher minimum level of browser version than required by the classic pages. For example, a classic page may require Internet Explorer 9, while the fluid version of that page may require Internet Explorer 11. The system detects the browser version and only displays fluid pages on device browsers meeting the minimum requirements for fluid page display.

Mobile Application Platform

With release 8.54, PeopleSoft is delivering, for the first time, the ability to create a responsive user interface using standard technologies such as HTML5, cascading style sheets (CSS3), and JavaScript.

Applications built using the Mobile Application Platform (MAP) will provide a completely different experience than those built using traditional PeopleTools components and pages. Applications built with MAP can include media queries that allow applications to scale from Smartphones to mini-tablets to full-size tablets and that adjust the user interface for the device perspective that is being used. The framework allows you to develop applications with touch interfaces that look and operate similarly to native interfaces on mobile devices.

MAP supports a web-only development model for the majority of the application development. The document-based data structures, page layouts, and styles are all defined in the PeopleSoft Pure Internet Architecture. Business logic processing is done through PeopleTools application class PeopleCode built in PeopleSoft Application Designer. Additional user-interface libraries can be easily plugged in and accessed on pages.

While MAP is similar in many ways to the PeopleSoft Fluid User Interface delivered with PeopleTools 8.54, there is a single major difference. That difference is that MAP reads and writes data through RESTful web services that pass through the integration gateway and provide the communication layer between MAP applications and the database.

Using RESTful services as the foundation of the framework offers these significant differences:

- Since all parts of the application are based on REST services, an open integration model that enables an application to navigate from one application to another, including third-party applications, is inherent in the design.
- You can develop applications that access content from different systems, making it a strong development platform when there is a need to collate information from various systems, such as in clustered environments.

It is important to note that while the framework is built on REST services, developing and manipulating REST services is not required; the framework takes care of building the services in the background.

The security model for MAP applications is also very different from the PeopleSoft Fluid framework. MAP applications can consist of one or more layouts. Since you can determine and assign different levels of security for each layout, security can be different when navigating through the application.

Another difference between MAP and the PeopleSoft Fluid User Interface is that developers can create templates that contain default styles, formatting, media queries, and other options that affect the appearance of mobile application pages. When used, templates provide style consistency among mobile application pages and mobile applications. If you are building multiple mobile applications and want them to have the same look and feel, using templates can help you achieve this objective, and templates can be especially helpful if different organizations, departments, and teams are involved in developing mobile applications.

The Mobile Application Platform is new technology that gives customers more options when designing and building responsive applications for mobile devices.

64-Bit Development Client

With PeopleTools 8.54, PeopleSoft applications will complete a journey that started with PeopleTools 8.48: the trek to a 64-bit architecture. PeopleTools 8.48 saw the UNIX application server ported to 64-bit, and that was followed by the Linux application server in PeopleTools 8.50. In PeopleTools 8.51, the PeopleSoft web server was converted to 64-bit. The application server running on Windows Server was ported to 64-bit with PeopleTools 8.53.

The final component to be modernized in the PeopleTools 64-bit architecture is the PeopleTools Development Client. With PeopleTools 8.54, the Development Client (which runs applications such as Application Designer, Data Mover, Change Assistant, nVision, Change Impact Analyzer, Application Engine, SQR, and so on) is now built as a 64-bit application, taking advantage of higher memory addressing and improved performance.

The final move to the 64-bit architecture of the PeopleTools development environment means that system administrators no longer need to acquire and configure the additional 32-bit connectivity software for your RDBMS platform.

PeopleSoft Application Designer

This section discusses enhancements to PeopleSoft Application Designer

Developing PeopleSoft Fluid User Interface Applications

PeopleSoft Fluid applications are built in large part the same as you build a traditional or classic PeopleSoft application, using the same general application development steps in Application Designer. You create fields, records, and build SQL tables just as you would a traditional PeopleSoft application, but when it comes to designing pages and configuring components, you depart somewhat from the steps and techniques used for building traditional PeopleSoft applications.

Application Designer is the main development tool used for building both traditional and fluid PeopleSoft applications, and PeopleCode is the main programming language used to interact with component processing events and implement business logic. However, with fluid applications, the application implementation teams that will develop and/or customize PeopleSoft fluid applications will need expertise in these additional areas (listed in order of importance and recommended experience):

- CSS 3
- HTML 5
- JavaScript (if required)

While you use the same main development tools in Application Designer, the options related to fluid development are clearly separate. For example, the properties dialog box for components, pages, and page controls, each have a separate Fluid tab, displaying the options for that definition or control if you are developing for fluid display.

Perhaps the most notable difference for developers between creating classic and fluid PeopleSoft applications is the process of designing page layout. With the traditional PeopleSoft application, the interface display is defined in Application Designer using a fixed layout, based on and bound to a pixel system. In the fixed layout, a developer can meticulously align fields, labels, group boxes, and so on, and be reasonably assured the page will appear in the browser running on a desktop or laptop just as it appears in the design-time layout. The traditional PeopleSoft application development design-time layout provides a WYSIWYG (what you see is what you get) scenario.

With fluid page layout, there is no need to align and position fields and controls manually so that they look just so. In fact, to some extent, page layout for fluid pages consists of ensuring the field or control exists on the page in generally the right order. All of the other aspects of layout and positioning and appearance are controlled by CSS-based freeform style sheets. Using CSS for layout and positioning provides the flexible, dynamic appearance of the page, but it will be an adjustment for many developers familiar with classic PeopleSoft development. Becoming adept with CSS 3 styling techniques is paramount to creating and customizing fluid applications

Support for PNG, SVG in Image Field in Application Designer

Application Designer supports creation of image field using PNG and SVG formats. While PeopleSoft Application Designer can create image file definitions that are of Portable Network Graphics (PNG) or Scalable Vector Graphics (SVG) formats, these image file definitions are visible only in PeopleSoft Internet Architecture (PIA).

Improved Text Search for Find In... Functionality

Find In... text search functionality has been improved in Application Designer for PeopleCode and SQL definition types. On the Find In... dialog box a developer can fine tune the text search by filtering search to certain categories of records and pages. This will yield less results and thus speeding the search. For example, a developer can search for text only in PeopleCode within derived records or only in secondary page PeopleCode.

Improved Definition Reference Search Functionality

In Application Designer, when using the Find Definitions References feature for field and record definitions, you can now search within a set of specific definition types. This focuses the search for references, yielding fewer results, making searches more efficient.

When searching for definition references for a field or record definition, a new dialog box appears enabling you to select from a list of definition types in which to search so as to narrow the scope of the search. For example users can search only pages when looking for references to a specific field definition instead of all the references to that field, which would require searching PeopleCode, records, component interfaces, and so on.

Auto-completion Support for the PeopleCode Editor in Application Designer

The auto-completion feature has been developed for PeopleCode application classes, built-in classes, built-in functions, system variables and constants in PeopleCode editor of Application Designer. When an object is created, the methods or properties of the appropriate class would be shown to the Application developer when a '.' (dot) is inserted soon after typing the object. The parameter details of the method would also be shown to the user. The application developer would be able to view all the PeopleCode built-in functions, system variables, and constants with the help of a keystroke CTRL+SPACE. This improves application developer productivity so users do not have to remember all the classes and methods.

The auto-completion feature could be enabled or disabled with the help of the configurable option provided with the feature. A customization option is also provided for the auto-completion list control. With this, users can modify the auto-completion list control size.

Toolbar Buttons Provide Quicker Access to Page and Record PeopleCode

New toolbar buttons for viewing page PeopleCode and record PeopleCode improve developer productivity. Page PeopleCode and record PeopleCode can be viewed with fewer clicks using the toolbar rather than the menu item.

PeopleSoft Search Technology

PeopleTools introduced the PeopleSoft Search Framework in PeopleTools 8.52, providing a powerful new way for end users to find business data, act on it, and navigate the PeopleSoft system. PeopleTools 8.54 extends the Search Framework for use with the PeopleSoft Fluid User Interface, providing a rich search experience that is optimized for small form factor devices, such as tablets and Smartphones, as well as larger monitors.

In addition, individual applications can customize contextual search pages to provide a richer experience where it may be necessary or valuable to the overall user experience.

The Search Framework now extends Global Search behavior to Component Search for fluid applications. With PeopleTools 8.54, Component Search pages will leverage Pivot Grid functionality, presenting search results in both visual charts and columnar lists. Pivot Grids' ability to drill from charts as well as incorporate rich facet and filter functions greatly improves the experience of analyzing and identifying target information. Related actions are also available across all types of search results. These enhancements are incorporated in fluid pages. Search results and interactivity in component search are optimized when viewed from a Smartphone to improve productivity and ease of use. Classic PIA pages continue to use the component search features of previous releases.

Search Indexes for Reports: PeopleSoft's Global Search feature now supports the inclusion of report contents in the preparation of global search indexes. This ability allows users to search for keywords in the PeopleSoft database and for the search to return results based on report content in the Report Repository rather than just the PeopleSoft transactional database.

Other enhancements to the PeopleSoft Search Framework include:

- Indexes built from file and web sources can now be included in the Global Search results by selecting the All category.
- Facets can now be based on numerical and date ranges, allowing more ways for users to sift through search results.
- Images can now appear in search results.
- Content in the report repository can now be indexed and searched.

PeopleTools Portal Technology

PeopleTools Portal Technology includes these enhancements in PeopleTools 8.54:

- Activity guide enhancements.
- Branding framework.
- Related content and related actions enhancements.

Activity Guide Enhancements

Activity guides are a useful PeopleTools feature that helps guide users through complex or infrequently performed processes. Activity guides provide users insight into the step-by-step flow of a guided process, potentially reducing user errors and process execution time. Activity guides have added support for adding batch process as a step in an activity guide by leveraging the self-service scheduling feature. This feature enables activity guides to encompass both transactional and batch processes in a single guided process.

PeopleSoft applications deliver a number of activity guides out of the box, but customers can create their own using PeopleTools. With PeopleTools 8.54, activity guides will be even easier to create and manage because PeopleTools includes an Activity Guide Management WorkCenter. This WorkCenter provides a complete step-by-step process for creating, configuring, maintaining, and deploying activity guides within a PeopleSoft application.

Activity guides will also be able to be cloned in whole so that guided processes and flows that are similar yet slightly different can be easily maintained and deployed. For example, if running a particular process varies by role, a base activity guide might be created and cloned, allowing a customer to configure the variations for each role.

Branding Framework

PeopleTools now provides a greatly expanded branding framework that is powerful and flexible, bringing the capability of managing the look and feel to all PeopleSoft applications without requiring the PeopleSoft Interaction Hub. With PeopleTools 8.54, many common branding activities, including managing content associated with the overall site style, are now performed online rather than by using PeopleSoft Application Designer. In addition, PeopleTools branding supports component-based branding, providing the ability to apply a consistent appearance when rendering content from multiple providers on the same page.

With PeopleTools branding, common actions, such as layout manipulation, style sheet and image use, and JavaScript injection, can be managed within PIA. For example, these tasks can be easily performed within the delivered online pages:

- Manage configurable header and footer layouts.
- Create and employ custom themes and skins, either site-wide or within individual components.
- Inject system-wide or component-level JavaScript and CSS snippets.
- Style iScript content as managed objects using meta-HTML tags.
- Online preview of style changes.

The PeopleSoft Interaction Hub has long provided a branding framework. And it still offers some optional branding capabilities, including a branding WorkCenter, that are particularly valuable across a cluster that includes multiple PeopleSoft applications.

From a lifecycle perspective, administrators can migrate branding objects from any PeopleSoft application using Application Data Sets. In addition, style sheets can be easily copied from PeopleSoft Interaction Hub for use in other applications across the cluster.

Related Content and Related Actions Enhancements

Related content enables users to access related information in the context of a transaction, and related actions enable people to take action on information in context, without navigation. While these features have been part of PeopleTools for several releases, PeopleTools 8.54 offers some important enhancements.

Related actions now provide a mechanism to associate a field change event of a particular field to an existing related action widget. This simplifies configuration and means developers no longer have to define an application class-based related content service for each action and copy their FieldChange PeopleCode to the application class. This reduces duplication of code and simplifies maintenance.

In addition, when a related action widget includes only a single action for a user, that single link will be displayed directly on the page rather than displaying a drop-down menu with just one item. This streamlines user actions and eliminates mouse clicks.

Some related content service types, such as component and iScript-based services, are only accessible to users who are authorized. This check is performed by the security authorization service. Now, the security authorization service can perform authorization checks for an application class-based service as well. Data security checks can be performed for iScript, pagelet, and PeopleSoft query content types, making the implementation of security easier when both basic PeopleTools security and row-level security are required.

PeopleSoft Documents Technology

A property has been added to the Document Builder - JSON page inside the JSON Details section called Hide Parent Object Label. When this check box is selected the system-generated JSON does not include the JSON label (object name in the parent document).

This provides more flexibility to create a third-party JSON string. Note, that this option will be enabled if the PeopleSoft document was created using the Consume Web Service wizard in PeopleSoft Integration Broker.

Application Engine

Application Engine features these enhancements:

Application Engine Trace File Enhancements

PeopleTools 8.54 will include the following features to streamline Application Engine Trace files.

- **Application Engine trace file split.**
You can set the file size of the Application Engine Trace file. Whenever the file size exceeds the defined file size value, the file will close and the log will shift to a new file.
- **Application Engine trace file naming convention.**
The naming convention for the Application Engine Trace file with a process instance will include the Date\Time stamp.
- **Application Engine program section trace.**
In previous versions, the trace file included output of the Application Engine program with all the sections. From this release you can select the sections to trace output in the Application Engine Trace file.
- **Application Engine trace file with PeopleCode and SQL trace outputs.**
You can combine the trace output for both PeopleCode and SQL into Application Engine Trace file.

Also for 8.54, it will be optional to commit changes in the Application Engine program to the database. You can opt not to commit the changes for application engine program to the database, if the application engine program is running from Application Designer.

Global Temporary Table in Application Engine

PeopleTools 8.54 extends the potential of Oracle Global Temporary Tables (GTTs) to Application Engine.

In 8.54, you can define Temporary Tables as GTTs in the Application Designer. This feature can be applied to Application Engine programs running in both batch mode and online mode. The data in GTT is session specific for Application Engine programs running in batch mode and transaction specific for Application Engine programs running in online mode. But GTTs in online mode cannot be shared between Application Engine programs. Each Application Engine program has its own set of GTTs. Therefore, it is recommended that GTTs should not be used as Share Tables in online mode. You can also define GTTs to re-startable batch Application Engine programs considering that the data in GTT will not be retained when the program exists.

Prior to 8.54, a warning was displayed whenever the number of instances of a temporary table exceeded 99. From 8.54, you can set the number of instances to a maximum of 9999 when the Application Engine program uses only GTTs in temporary tables. If the Application Engine program is using both GTTs and temporary then a warning is displayed when the number of instances exceeds 99.

Update statistics is not supported for Application Engine programs that use Oracle GTTs as temporary tables. Using this meta-SQL will have no effect on the result of Application Engine program.

Global Technology

PeopleTools 8.54 is adding four more pages to support translating definitions in target languages. The definitions added are:

- Composite Queries.
- MAP Layout.
- MAP Template.
- Data Set Definitions.

PeopleTools 8.54 introduces a faster method to convert Oracle databases to Unicode. Oracle Database Migration Assistant for Unicode (DMU) is a migration tool that provides a complete solution on Oracle databases to convert to Unicode. It also provides validation to identify any data that may have issues converting to Unicode.

System Administration Tools Enhancements

This section discusses enhancements made to system administration tools in the following areas:

- Server Administration and Data Management.
- Security Administration.
- Automated Configuration Management.

Server Administration and Data Management

This section discusses Server Administration and Data Management enhancements.

Portable PS_HOME

PeopleTools has focused on a number of enhancements related to PS_HOME in recent PeopleTools releases to make PS_HOME more secure, with a clearer separation of functionality. It began with providing a more secure installation by splitting out logs, cache and configuration files into PS_CFG_HOME, which allowed PS_HOME to become read-only. From there, we created PS_APP_HOME to split the PeopleTools and PeopleSoft application objects apart, thus removing any ambiguity of which objects are changed during a PeopleTools vs. application upgrade, or during the application of maintenance. PS_CUST_HOME arrived with PeopleTools 8.53 and provided a mechanism to separate any customized code (COBOL, SQR, and so on) from delivered code.

With PeopleTools 8.54, the latest enhancement involving PS_HOME, Portable PS_HOME, will provide an easier way to use a private cloud configuration where multiple application installations use the same PeopleTools install. Hard-coded paths and symbolic links are removed, which will allow the install of PeopleTools to be more easily copied to other servers. UNIX file servers can create a mount point to use the installation with any number of environments. With a single PeopleTools install being used with multiple application installs, procuring an environment becomes faster and cheaper. In addition, when it is time to apply maintenance, it is quickly performed in one place instead of in each separate environment, thus lowering the total cost of ownership.

PSADMIN Symbolic Link Removed for Portable PS_HOME (UNIX)

The symbolic link from PS_HOME/appserv/psadmin to PS_HOME/bin/psadmin will no longer be created at install. Any existing custom scripts in your implementation that invoke PS_HOME/appserv/psadmin will need to be changed to invoke PS_HOME/bin/psadmin or invoke psconfig.sh prior to invoking PSADMIN without a fully qualified path name.

Changes to psconfig.sh for Portable PS_HOME (UNIX)

Sourcing this script will continue to be necessary prior to using any PeopleTools functionality on UNIX. However, this file will no longer contain a hardcoded path to PS_HOME, which means that the script will derive the location of PS_HOME from the context in which it runs. As such, it is required that the current working directory is PS_HOME prior to sourcing psconfig.sh.

Changes to PS_HOME\peopletools.properties for Portable PS_HOME

The installlocation value, which in previous releases identifies the PS_HOME variable, has been removed in PeopleTools 8.54 for the copy of the peopletools.properties file written to PS_HOME during installation. However, the installlocation key will continue to appear in the peopletools.properties file that resides in PS_CFG_HOME. The system generates the value when creating the PS_CFG_HOME. As in:

```
installlocation=C:\\PT8.54
```

This presence of the installlocation value in PS_CFG_HOME\peopletools.properties enables the EMF Agent to discover the location of the appropriate PS_HOME when crawling the environment, and it also associates the configuration home location with the appropriate PeopleTools install, from which it was created.

MetaSQL Enhancements

Two new metaSQL enhancements for the Oracle database are delivered with PeopleTools 8.54 that are designed to offer more flexibility with performance tuning and better overall performance.

%SqlHint can be applied to SQL or PeopleCode to assist with those performance conditions for which the optimizer ran better on a previous database release or simply makes a poor choice.

%SelectDummyTable offers a better way of performing SQL calculations against a dummy table. When a real table such as PS_INSTALLATION is used, a round trip to the database is incurred, wasting both CPU and the time for the round trip. When this is performed many times, the inefficiency adds up. The new metaSQL function uses Oracle's DUAL table to avoid the useless round trips to the database.

PeopleSoft Plug-in for Enterprise Manager 12c

Application Management Suite for PeopleSoft leverages Oracle Enterprise Manager as its technical foundation to enable the business driven approach of managing PeopleSoft. The PeopleSoft plug-in for Enterprise Manager 12c provides a set of PeopleSoft-specific tools, such as Domain Administration and Process Scheduler Management that are designed to address the unique management challenges of the PeopleSoft applications.

The PeopleSoft plug-in for Enterprise Manager 12c in PeopleTools 8.54 includes the following enhancements:

- Extended Diagnostics.

This feature extends the current logging with hints for normalizing local environments and custom configurations.

- Ease of discovery and configuring the Process Monitor target.

The Process Monitor target is a useful feature of the PeopleSoft plug-in, providing deeper insight to batch processing. This feature will aid in configuring the PROCESSREQUEST web service for greater ease of discovery of the Process Monitor target.

- Extending use of delivered Enterprise Manager user-interface framework.

The PeopleSoft plug-in takes advantage of delivered core Enterprise Manager framework. The Enterprise Manager core team has enhanced the user-interface framework, and in this release. PeopleTools has incorporated those changes into the plug-in pages.

Global Temporary Tables

Global Temporary Tables (GTTs) are Oracle database working tables whose data persists for the span of a specific process. Multiple processes are able to use these work tables without any data collision among processes because the data is process-specific and operations on the data in one session will not affect the data in use by any other process. GTTs improve performance by automatically discarding data at the end of a session. GTTs are not logged by design, and they will not incur any logging overhead.

Oracle Materialized Views

Materialized views take the results of complex SELECT statements and save the datasets to disk. The results are then readily available without the need to run the SQL each time. The SELECT statements typically defining materialized views often contain sizable tables, complex joins, and summary functions that may take some time and computing resources to complete. By running the SQL once and saving the results to be used and reused, a significant savings of CPU and memory consumption can be achieved. Materialized views provide significant improvements in performance when used in Pivot Grids that do not use frequently updated data sets. The data is refreshed on a time period defined in the materialized view.

PeopleTools 8.54 will enable potentially significant CPU savings by using materialized views for the Oracle database. Application Designer will have the ability to declare and define materialized views (including the data refresh period) for use within PeopleSoft applications.

Multitenant Database Support

Multitenant Database is a new feature included in Oracle database 12c that provides the ability to move previously autonomous databases (such as PeopleSoft application databases) into a single container database instance. Each database that is plugged into a container still appears to be unique; however, several advantages are gained, including:

- The pluggable databases in a container database share a common catalog and background processes, which reduce the CPU and memory footprints.
- Database patching is performed once at the container database level and used by all pluggable databases, which greatly simplifies maintenance.

- Managing databases is significantly improved because one container database is much easier to manage than all of the independent pluggable databases. Backups and disaster recovery are performed at the container level instead of each pluggable database being managed independently.
- Provisioning, cloning, or both are greatly improved. Databases can be cloned in seconds.

With PeopleTools 8.54, container databases and pluggable databases can be configured within Application Designer, thus eliminating the manual steps previously required to create a Multitenant Database environment.

Partitioning for Oracle Database

In PeopleTools 8.51, PeopleTools began saving the partitioning configuration that customers would implement in a PeopleSoft database. Before this, customers would need to reapply their partitioning settings each time they performed a PeopleTools upgrade. While that was helpful to some extent, PeopleTools 8.54 really completes the enhancement.

With PeopleTools 8.54, Oracle database customers are able to configure partitioning of PeopleSoft tables as well as indexes, all using Application Designer. These configurations no longer need to be done outside of PeopleSoft.

Monitoring and Adjusting Domain Cache during Runtime

Several new settings are available in PSADMIN that enable the system to monitor and adjust automatically a domain's cache while it runs, requiring no intervention from system administrators, and without requiring the domain or a server process to be restarted.

Push Notification Event Framework

This section describes features of the Push Notification framework, including Push Notifications and Notification Window.

Push Notification

Push Notification is an event framework that enables PeopleSoft server run time to push data directly to PeopleSoft Pure Internet Architecture browsers. This allows bidirectional full duplex communication between browser clients and server runtime. The feature allows defining individual events or group-related events as collections and provides an API to dispatch events to browser clients.

A PIA browser page subscribes to the events through one of the following ways.

- IWC. (Inter Window Communication)
- Custom JavaScript subscription.

The published event data is passed to the browser page in the form of a JSON (JavaScript object notation) object. This feature requires web socket support for web servers and reverse proxies.

Notification Window

Notification Window uses the push mechanism provided by Push Notification and collates various notifications generated by the system to the window. It categorizes notifications into actions and alerts and allows actions to be performed on the notification items. Approval Workflow Engine (AWE) and Trigger Business Event (TBE) are some of the functional areas that will have their notifications published to the Notification Window.

Security Administration

In addition to reviewing industry trends, PeopleTools uses customer input to help decide which additional features to add and which to extend. Most of the security features in PeopleTools 8.53 have resulted from customer discussions. This section describes how the Secure by Default initiative is expanding in PeopleTools 8.54.

Extending Secure by Default Initiative

In line with an overall [Oracle Secure Configuration Initiative](#), PeopleTools 8.54 continues to expand on its Secure by Default installation. Secure by Default is an approach to ensure that the application configuration settings adhere to system hardening recommendations. PeopleSoft has historically delivered a number of default user IDs and passwords that could become well known and would present a compromise if they were not changed or removed in production. PeopleTools 8.54 will:

- Deliver hardened Oracle VM appliances.

Virtual Appliances, such as the PeopleSoft Update Manager, are extensively tested and hardened in line with the Secure by Default Initiative.

- Oracle Secure Files for Report Repository.

Oracle Secure Files can be exposed as virtual mount points, which provide a directory structure for the PeopleSoft Report Repository. Secure Files can then be protected and managed transparently by in-place DB processes to PeopleSoft Report Manager.

- Revalidate password.

This feature will support LDAP authentication.

- Provide extended support for digital signatures.

This feature allows PDF-formatted reports produced by BI Publisher to be digitally signed.

Security Authorization Service

PeopleTools has extended the Security Authorization Service functionality to configure row-level security to multiple content types. In PeopleTools 8.54, row-level security is extended to iScript, PeopleSoft Query, application classes and pagelets that were previously restricted to component and content references only. To authorize services, you can associate a security application class to multiple content types on a single page. This will ease the maintenance and audit activities to configure authorizations when you are reusing a security application class.

PeopleTools 8.54 will also authorize you to set attributes on Related Content services. You will be able to enable and disable any action, add or update mouse-over text and update action service labels when you are logged in as a user.

PIA-Based Definition Security

PeopleTools has been delivering a two-tier Definition Security application for securing PeopleTools managed objects, such as components, menus, pages, records, fields, and so on.

Beginning this release PeopleTools is also delivering this functionality in the PeopleSoft Pure Internet Architecture.

Like two-tier Definition Security, PIA-based Definition Security enables you to create, copy and delete definition groups, as well as grant permission list access to definition groups.

However, PIA-based Definition Security provides additional functionality that is not available in the two-tier application. Specifically, the ability to:

- Create inclusion rules so that new objects added to the database and that meet an inclusion rule are added to a definition group.
- Define row-level security by definition type.
- Enable or disable Secure by Default for all objects covered by Definition Security.
- View unsecured definitions/definitions that don't belong to a group.

Note that the two-tier Definition Security application will continue to be delivered and you can continue to access it using PeopleSoft Application Designer or the PSOSE executable file.

External Digital Certificates

The PeopleTools security framework includes a new External Digital Certificates page to support a BI Publisher for PeopleSoft enhancement for creating digital signatures for report output. The digital signature verifies the signer's identity and ensures that the report output has not been altered. Digital signatures can be attached to all PDF output and is enabled for both PDF and RTF templates.

The "Reporting and Analytic Tools Enhancements" section of this document contains more information about this and other [BI Publisher for PeopleSoft enhancements](#).

Enhanced Login Audits

For every PIA sign on attempt, there will be two rows:

- Information about the last successful login, including timestamp and authentication type.
- Information about the last failed attempt, including timestamp, failed logic count and authentication type.

The information is logged in and can be queried from the PSPTLOGINAUDIT table. Enhanced login audits are enabled in the application server configuration file.

Note that the access log queries generated by the PSACCESSLOG table, Access Activity by User, Access Activity by Day, and Active User List, continue to be delivered.

Automated Configuration Management

Prior to 8.54, PeopleTools products/components configuration required time consuming, error-prone, manual tasks. In 8.54, PeopleTools introduces a new framework with a set of plug-ins grouped in a template that enables you to perform products/components configuration using PIA or command line. Moreover, the framework provides a configuration monitor that accurately displays the erroneous parameters. PeopleTools delivers more than a dozen plug-ins including Integration Broker, Oracle Secure Enterprise Search, Unified Navigation, and PeopleSoft Test Framework. In addition, users can develop their own plug-ins.

Reporting and Analytic Tools Enhancements

This section covers changes made to the PeopleSoft reporting and analytic tools, including:

- PeopleSoft Pivot Grid.
- BI Publisher for PeopleSoft.
- PeopleSoft Query.
- nVision.
- Query Access Service.
- PeopleSoft SQR.
- Tree Manager.

PeopleSoft Pivot Grids

Since their release a few years ago, Pivot Grids have become a valuable component of PeopleSoft's rich reporting and analytics toolset. With PeopleTools 8.54, our teams continue to enhance this important technology to become an integral element of the PeopleSoft user experience.

As mentioned, the PeopleSoft Fluid User Interface takes advantage of Pivot Grids both on the new fluid homepage tiles as well as the basis for the new component search framework used for fluid components. These new capabilities ensure that visual insight and analytics are woven directly into the fabric of the PeopleSoft application, rather than merely graphics pasted onto a page.

PeopleTools 8.54 brings a number of extremely important new features to PeopleSoft Pivot Grid:

- Viewing PSQuery drilling URLs in Pivot Grid Detail View.
- Attaching PeopleSoft Trees to dimensions.
- Setting currency formats.
- Resetting layout.
- Creating Pivot Grid models directly from Query Manager.
- Setting embedded help.
- Expanding and collapsing dimensions in the grid.
- Configuring Pivot Grid Views using Pivot Grid Wizard.
- Specifying the display mode.
- Displaying all views in the Pivot Grid Viewer search page.

- Drilling down to details from the charts.
- Using Component Real Time Search in Pivot Grid fluid mode.
- Creating component Pivot Grid models using Pivot Grid Wizard.
- Viewing Pivot Grid models in fluid mode.
- Publishing Pivot Grid fluid views as grouplets.
- Using the Component Real-Time Search and viewing Pivot Grid models in mobile interaction platforms.
- Embedding Pivot Grid fluid subpages in application pages.
- Copying the fluid components between databases.
- Setting the limit of the Pivot Grid result rows.

Viewing PSQuery Drilling URLs in Pivot Grid Detail View

PSQuery supports drilling URLs that enable you to navigate to either a PeopleSoft Pure Internet Architecture page, another query result page, or an external page. These drilling URLs can contain context-sensitive bind values obtained from the query result row. For example, a drilling URL enables you to navigate from the query result rows to a component by taking key values from the query result row where you click a cell.

You use PeopleSoft Query - Query Manager to define drilling URLs. When a Pivot Grid model uses a query as the data source, and that query is defined to include the drilling URLs in the query results, Pivot Grid Detail View displays the drilling URL results.

Attaching PeopleSoft Trees to Dimensions

Each dimension in the Pivot Grid model can be associated with a PeopleSoft Summer Tree (which has the tree details associated with a component). The totals that appear in the detailed view are limited to only the lowest level of the tree structure.

Setting Currency Formats

You can use the Specify Data Model Values page - Formatting Options section to set the currency controls, currency symbols, and one-thousand separators.

Resetting Layouts

If the personalization views are available for the current model, you are able to clear all the personalizations and to reset the Pivot Grid model to the default setting (without personalization).

Creating Pivot Grid Models Directly from Query Manager

From the Query Manager component, the Pivot Grid designer, application developers, or report administrators can use the Publish as Pivot Grid link to access the Review Pivot Grids page.

From the Review Pivot Grid page, they can click either the Edit or the Add button to access the Pivot Grid Wizard – Select Data Source page, where they can add new Pivot Grid models or update existing ones that use the current query as the data source.

Setting Embedded Help

In the Specify Data Model Options page – Display Options section, if the Show Help option is selected:

- The Help Message section appears and you are able to define the help information.
- The embedded Help icon is available in the Pivot Grid Display and Pivot Grid Viewer pages.
Note that the Help icon is shown only in the classic viewer and it is unavailable in the fluid viewer.

Expanding and Collapsing Dimensions in the Grid

When the Pivot Grid model contains dimensions with totals on the lowest level of the grid row or column, the Expand All and Collapse All links appear in the grid title region on the Pivot Grid Display page.

You use the Expand All link to expand all the dimensions in the row and column positions for totals. You can also use the Collapse All link to collapse any expanded positions in the grid row or column for totals.

Configuring Pivot Grid Views Using Pivot Grid Wizard

From the Pivot Grid Display page in Pivot Grid Wizard, you can use the Configure Pivot Grid View link to access the Pivot Grid Views Component, where you can create or edit views that are associated with the Pivot Grid model.

Specifying the Display Mode

You are able to specify a display mode at the view level for PSQuery Pivot Grid models. The selected option in the Display Mode section on the Specifying Data Model Options page can override the viewer that is used for opening the Pivot Grid view.

Displaying All Views in Pivot Grid Viewer Search Page

When you search for existing Pivot Grid models using the Pivot Grid Viewer search page, you can select the Show All Views option to display the default and non-default views that are associated with the Pivot Grid model.

Drilling Down to Details from Charts

If related actions are not configured in the Pivot Grid model for the aggregate view, clicking the value number links on the grid or on the chart enables you to directly access the detailed view.

If related actions are configured in the Pivot Grid model for the aggregate view, clicking the value number links on the grid or on the chart populates a context menu with two options: Detailed View and Actions. You can click the Detailed View option to access the detailed view.

Using Component Real Time Search in Pivot Grid Fluid Mode

The Fluid mode in Pivot Grid enables you to perform the component real-time search (CRTS) based on Pivot Grid models. You can use the Pivot Grid Wizard to define the Pivot Grid models by selecting Component as the data source. The wizard creates a query behind the scenes and associates it with the Pivot Grid model. The created (auto-generated) query is based only on the search record of the component. The keys of the search record become the prompts for the Pivot Grid model.

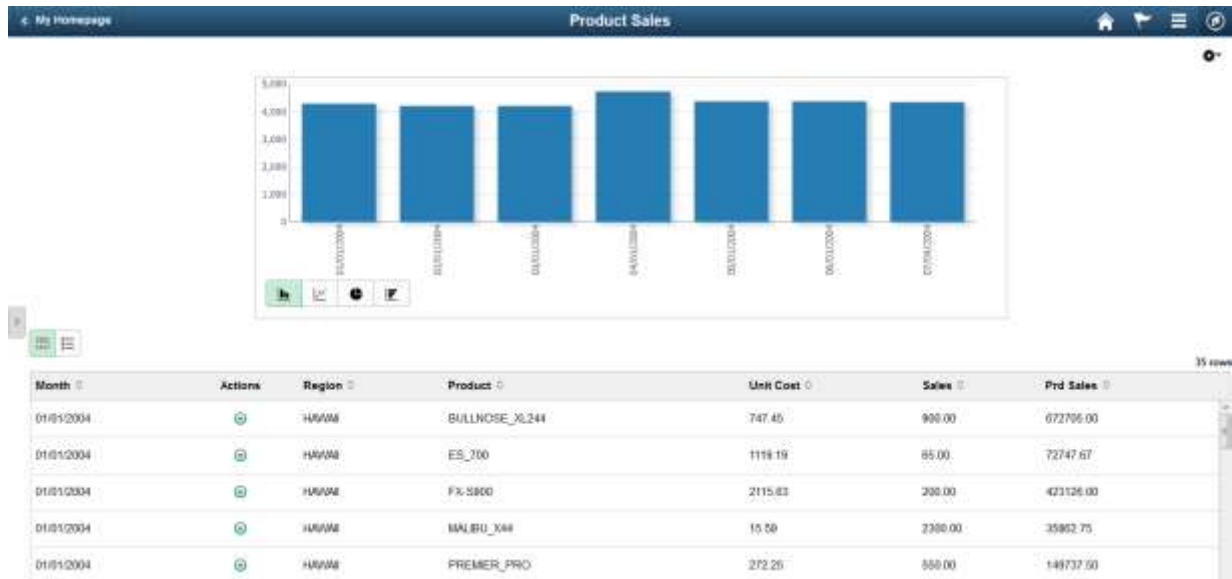
Creating Component Pivot Grid Models Using Pivot Grid Wizard

In the previous releases, you were able to create Pivot Grid models using Pivot Grid Wizard and set PSQuery as the data source. Beginning from PeopleTools release 8.54, you are able to create Pivot Grid models using Pivot Grid Wizard and set Component as the data source.

Viewing Pivot Grid Models in Fluid Mode

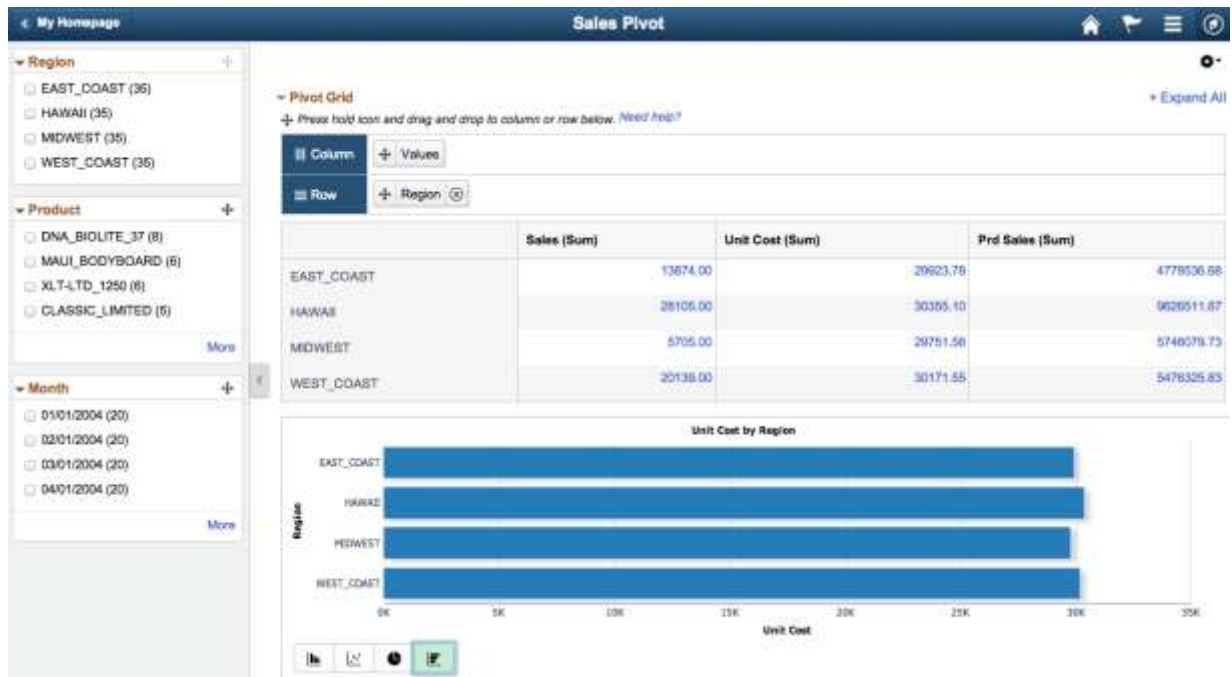
Pivot Grid Fluid mode, or Pivot Grid Fluid Viewer, represents the Pivot Grid models in a touch friendly and responsive user interface. All Pivot Grid models, including the existing Pivot Grid models created in an earlier release, can be represented in the Fluid Viewer component.

This example shows the grid and detailed view for a Pivot Grid model. You can perform drilldown to details from the chart, change the axis level, drag axis between column and row regions, drag filters to rows or columns, expand or collapse nodes in the grid, and so on.



Pivot Grid and Chart Model in Fluid Mode – Chart and Detailed View

This example shows the grid, chart, and facets for a Pivot Grid model.



Pivot Grid and Chart Model in Fluid Mode – Grid, Chart, and Facets

Publishing Pivot Grid Fluid Views as Grouplets

Application developer can use the Publish as Grouplet link in Pivot Grid Wizard to create the grouplets that are used in the Fluid mode. These grouplets are configured to point to the Fluid Viewer component for the specific Pivot Grid model.

Using the Component Real-Time Search and Viewing Pivot Grid Models in Mobile Interaction Platforms

You can use mobile interaction platforms (for example, smart phones, iPad, and so on) to view Pivot Grid models and apply the functionality of Component Real-Time Search (CRTS).

Embedding Pivot Grid Fluid Subpages in Application Pages

Application developers can embed multiple Pivot Grid fluid subpages inside any application Fluid page to display different views of the Pivot Grid model.

This example shows the rendered application fluid page Job Openings. The application page includes subpages of search options, facet, locator links, chart, and detail results view. Note that the facet drives both the chart and the results view.

Copying the Fluid Components between Databases

You can copy the fluid components between databases. However, you cannot copy the Pivot Grid the model that was created using component as the data source because only one Pivot Grid model can be associated with a component.

Setting the Limit of the Pivot Grid Result Rows

You use the Max Rows in Pivot Grids field in the PeopleTools options page (PeopleTools, Utilities, Administration, PeopleTools Options) to set the number of rows returned in detail or list view in search (that is obtained by executing the query).

The default setting is 100. This setting applies for component real time search view, Fluid Mode view, and Pivot Grid Detail View.

BI Publisher for PeopleSoft

PeopleTools 8.54 extends the capabilities of BI Publisher to include a number of important enhancements, including:

- Support for Postscript and PCL printing for PDF output.
- Support for digital signatures on PDF output.
- Support for updating PDF output.

Support for Postscript and PCL Printing for PDF Output

In PeopleTools 8.54, BI Publisher supports embedding of Printer Control Language (PCL) code in RTF templates to enable printing PDF with Secure Fonts™. PCL printing for PDF output is used for printing checks securely. Additionally, BI Publisher supports direct printing of PDF on PostScript (PS) compatible printers.

Support for Digital Signatures on PDF Output

BI Publisher reports output as PDF can now be digitally signed which verifies the signer's identity and ensures that the document has not been altered after it was created. Digital signatures can be attached to all PDF output and is enabled for both PDF and RTF templates.

Support for Updating PDF Output

PeopleTools 8.54 adds the ability for BI Publisher PDF output to be updated by users and for the updated content to be submitted to PeopleSoft automatically. With this feature, a user can update information on a report or form and click an embedded Submit button to send the updated data back to the PeopleSoft database. The updatable PDF feature is perhaps most commonly used with government-delivered PDF templates. It works in both HTTP and HTTPS protocols. The updatable PDF feature is supported only for reports that use a PDF template.

PeopleSoft Query

PeopleTools 8.54 brings a number of important enhancements to the already mature and feature-rich PS Query foundation.

Enhancements include:

- Default values for prompts.
- Image support.
- Related-language record processing using COALESCE.
- Multiple query security records.
- Find Query/Connected Query definitional references.
- REST service enablement of query.
- Support for greater than 64 thousand rows when sending query output to Microsoft Excel.
- Composite query.

Default Values for Prompts

Query prompts can have default values, which are specified as constants or by the use of system variables such as %Date, %DateTime, %Time. Prompts can be set as optional.

Image Support

Queries run through Query Manager, Query Viewer, Scheduled Query or directly through PS Query API methods (RunToRowset, RunToFile, and so on) and can now include image fields in their result sets. Available options are to return embedded image data (base 64 encoded), image hyperlink, display blank (legacy mode).

Related Language Record Processing Using COALESCE

Language translation has been moved from post-processing directly into the Query, which enables PeopleSoft to include the target language in determining sort order for query results. This capability is leveraged by Pivot Grids and PeopleTools Search Framework.

Multiple Query Security Records

PeopleTools has added an Advanced Query Security option to Application Designer. This feature allows up to five Query Security Records to be associated with a single record, including the ability to associate security with non-key fields. While powerful, this feature should be used sparingly because multiple additional joins will affect query performance.

Find Query/Connected Query Definitional References

PeopleTools 8.54 adds a Find References link, allowing a user to determine if a Query or Connected Query is used as a data source by another component, such as another Connected Query, BI Publisher report, Pivot Grid, Search Definition, or RSS Feed.

REST Service Enablement of Query

All Query Access Service (QAS) services are now also available as REST services.

Support for Greater Than 64 Thousand Query Rows in Query Results

PeopleSoft Query supports greater than 64 thousand rows when users send query output to Microsoft Excel.

Composite Query

With PeopleTools 8.54, developers will use the new Composite Query feature (essentially a superset of the previously provided Connected Query) to retrieve multiple levels of related information as a single, flattened query result, allowing for the subsequent aggregation and transformation of the data. In addition, PeopleTools supports a new UI for managing Composite Queries, support for web services via Query Access Service, as well as a complete API for programmatic creation and execution of Composite Queries.

nVision

PeopleTools 8.54 extends the existing support for Microsoft Excel format reports by adding a Cross Platform Framework (PXF) for Excel report generation. PXF enables users to deliver Excel format reports for nVision and Query output to Excel without having to maintain a Windows server in the data center.

Query Access Service

In addition to the features described previously, PeopleTools 8.54 has added a number of other important enhancements to the breadth of Reporting and Analytics tools, including:

Query Access Service (QAS) has added support for REST services in PeopleTools 8.54.

PeopleSoft SQR

Additional capabilities have been added to the already robust and mature SQR platform. These include:

- Support for 64-bit executables on Microsoft Windows.
- Support for XML output type.
- Rich Text support for long edit fields.
- Ability to use administrator's personalizations when running an SQR report.

Tree Manager

Starting from release 8.54, using the Tree Manager page, you are able to cut multiple tree nodes or tree leaves using the Cut icon, and then you use the Paste as Sibling or Paste as Child icons to paste all cut tree nodes or tree leaves at once together as children or siblings.

Integration Tools Enhancements

This section discusses the enhancements in PeopleSoft's integration tools and describes enhancements to

- PeopleSoft Integration Broker.
- PeopleSoft Component Interfaces.
- MultiChannel Framework.
- Workflow Technology.

PeopleSoft Integration Broker

In PeopleTools 8.54, investments are being made to ensure it is easier to administer and manage a PeopleSoft integration environment, to improve the integration development experience, and to extend the options developers have when creating new integrations. This section describes enhancements to PeopleSoft Integration Broker, including:

- Integration Broker configuration requirements.
- REST services.
- Remote Intradoc Client (RIDC) target connector.

Integration Broker Configuration Requirements

The Mobile Application Platform delivered in PeopleTools 8.54 uses PeopleSoft Integration Broker and REST services as part of its framework. As a result defining the target location for REST services is mandatory as part of the Integration Broker configuration. And, when defining the REST target location, the default local node must be part of the REST URL.

REST Services

This section describes enhancements to the PeopleSoft REST services framework in PeopleTools 8.54.

Additional Inbound Security Options for REST Provider Services

Two new options will be available for setting the security requirements for inbound consumer REST services.

Currently, when developing provider REST services, you can require that inbound consumer services are sent using SSL, basic HTTP authentication, and basic HTTP authentication and SSL, or none of these.

Beginning in PeopleTools 8.54, PeopleSoft Token and PeopleSoft Token and SSL are added inbound security options.

Optional Content Types and Status Codes

To add more flexibility in the REST framework, you can assign optional content types and status codes to message instances on REST service operations.

Generated WADL documents will reflect the optional selected values, allowing consumers to request the content type they prefer.

You can define optional content types on request, response, and fault message instances. You can define optional status codes on response message instances.

Remote Intradoc Client (RIDC) Target Connector

PeopleTools is delivering a Remote Intradoc Client (RIDC) target connector to allow users to interact with the Oracle WebCenter Content product.

Oracle WebCenter Content provides leading edge solutions for all types of content management needs. It has been chosen as the repository for large data sets for Fusion document discovery and transfer.

The new connector will:

- Allow files to be uploaded to or downloaded from the Oracle WebCenter Content server.
- Support text and binary file types such as xls, PDF, doc, and ZIP.

PeopleSoft Component Interfaces

In the previous release of PeopleTools, the Excel to Component Interface utility did not consolidate all errors for data submission on a single worksheet. PeopleTools 8.54 is adding an Errors worksheet to display all of the errors. These errors were previously displayed using mouse over move on the error status in the Status column of the Staging and Submission worksheet. You can also review the errors from an HTML page in tabular format. This will help you to review errors and warnings, now that they will be on a single worksheet.

From this release of PeopleTools you can also validate multiple component interfaces in PeopleSoft Application Designer. This dismisses the cumbersome process of validating bulk component interfaces one by one in Application Designer.

MultiChannel Framework

This section describes the enhancement made to Multichannel Framework:

Microsoft has retired Messenger and no longer supports any presence detection features. Therefore, MCF no longer supports presence detection on MSN client messaging. Also, Skype no longer supports presence detection feature in a contact list, so MCF no longer supports presence detection on Skype client messaging.

Workflow Technology

Enhancements to Workflow Technology include advanced Worklist Search and rich text support for Trigger Business Event emails.

Advanced Worklist Search

This enhancement utilizes the PeopleTools Search Framework and simplifies the query generation and configuration of other SES related objects for workflow. This enables users to search for worklist entries based on application-specific fields.

Rich Text Support

This enhancement provides a new option in the activity mappings to support rich text in Trigger Business Event emails.

Lifecycle Management Tools Enhancements

This section discusses the changes to PeopleSoft lifecycle management technology, including:

- PeopleSoft Update Manager.
- Change Assistant.
- Data Migration Workbench.
- PeopleSoft Test Framework.

PeopleSoft Update Manager

The PeopleSoft Update Manager (PUM) tool, introduced with the PeopleSoft 9.2 application releases, streamlined the process of applying updates using the PeopleSoft Update Image. PeopleTools 8.54 provides new features that provide the ability for the source and target PeopleSoft systems to be on different PeopleTools versions.

The new features include:

- The current PeopleSoft Update Image for each application will be on PeopleTools 8.54.
The image supports patching PeopleTools 8.53 and PeopleTools 8.54 databases, and as a result customers can continue to patch their PeopleTools 8.53 databases without upgrading.
- The PeopleSoft Update Image shared folder will include the supported 8.53 Oracle (32-bit) and PeopleTools clients, as well as the supported 8.54 Oracle (64-bit) and PeopleTools clients.
- Data Migration projects have been integrated with PUM to create a composite project of customer-selected units of work containing DMW projects and their dependents for ADS in a manner similar to what has been done for IDE objects in 8.53.

Change Assistant

This section describes the new features for Change Assistant, including:

- Updated user interface.
- Environment Management Hub is only used for file deploy.
- Upload target database information to PUM source.
- Support for applying database changes delivered with PeopleTools patches.
- Extended command-line functionality.

Updated User Interface and Wizards

The Change Assistant user interface has been redesigned to simplify the setup process and avoid duplicate effort in defining databases. The new UI uses the PeopleTools tangerine color scheme. Each action has an associated Wizard to guide the user through the process. The Change Assistant user interface has been redesigned to simplify the setup process and avoid duplicate effort in defining databases. The new user interface uses the PeopleTools tangerine color scheme. In addition to the new look and feel, the user interface features the following enhancements:

- Each action has an associated Wizard to guide the user through the process.
- Decoupled Applies.

In PeopleTools 8.53 all processes/actions required a source and target database to be defined. In PeopleTools 8.54, we provide source-only and target-only options where possible.

- The create package process has been split into independent actions.
- Enhanced package compatibility checking and validation.
- The Job view features these updates:
 - An option has been added to display filtered template steps.
 - Additional step statuses have been added.

Environment Management Hub is used for File Deploy

After a database has been defined to Change Assistant, Change Assistant will retrieve the database information without relying on EMF. You need only configure EMF if using File Deploy.

Upload Target Database Information to PUM Source

The Upload Database Information to PUM Sources is a stand-alone task in PeopleTools 8.54.

You can use this action to upload the target database information, including products and maintenance logs. Once the database information is uploaded, the database will be available in PeopleSoft Update Manager as a target database.

In previous releases this action occurred during internal processing, but was not a selectable task.

Support for Applying Database Changes delivered with PeopleTools Patches

When you install a PeopleTools patch, a change package containing all the database changes will be included in the PTP directory. A new task has been added to the Update Manager action “Apply a Patch to Your Current PeopleTools Release”. The wizard will guide you through the setup process, check the compatibility and apply the patch.

Extended Command-Line Functionality

In PeopleTools 8.53 applying packages using the command-line interface was supported. This release you can perform most PeopleSoft Update Manager configuration and set up using the command-line interface.

Data Migration Workbench

Data Migration Workbench is a lifecycle management tool first delivered with PeopleTools 8.53 that enabled customers to move and compare configuration data easily and securely between PeopleSoft application instances such as DEV, TEST, and PROD. PeopleTools 8.54 introduces enhancements to improve data integrity, allow for conditional merging of data, and add to the overall robustness of the utility.

This section describes the new features for Data Migration Workbench, including:

- Enhancements to Application Data Sets.
- Merge capabilities.
- Updated user interface.

Enhancements to Application Data Sets

Application Data Sets are the primary data structures used in Data Migration Workbench. The new features in 8.54 provide the ability to:

- Define relationships within and between Application Data Sets to better define structure. These references have properties that determine how and when certain processing will be done to better edit the data and when to include related objects into a project. They will also ensure that referential integrity rules are applied.

- Define groups of records and fields within an Application Data Set that, together with group properties, can be used to define records and fields that can be safely merged or that should be hidden from compare.
- Associate application classes that automatically perform specialized shape and value transforms that occur between Tools releases when needed.

Merge Capabilities

Data Migration Workbench is used to migrate PeopleTools features, such as Pivot Grids and Activity Guides, from one PeopleSoft instance to another. In some cases, code may be required to apply PeopleSoft-delivered changes on top of a customer's customizations. A new feature within Data Migration Workbench allows specific rules to be applied when migrating data to enable changes to be applied while preserving customizations.

Updated User Interface

The user interface for reviewing compare reports has been redesigned to provide summary information regarding additions, deletions, differences, same and messages. Users can drill down to view the details for each line displayed and decide whether or not to accept the action.

PeopleSoft Test Framework

PeopleSoft Test Framework (PTF) enables customers to automate testing with a tool that integrates with and has firsthand knowledge of PeopleSoft metadata. Enhancements for PeopleTools 8.54 focus primarily on providing smart automation, which is all about running the tests that need to run in the way that they should be run based on what has happened in your application.

By improving integration among PeopleSoft Test Framework, PeopleSoft metadata, and lifecycle management reports, in release 8.54, you will now be able to easily determine which tests require modification and which tests need to be run.

Changes to PeopleSoft Test Framework also include many usability enhancements for creating, administering, recording, and executing tests.

This section describes the new features for PTF, including:

- Mass update.
- Filtered views.
- Usability enhancements.
- Reporting enhancements.

Mass Update

In the PTF Client Tools menu, a new Mass Update option is available. This feature enables bulk updates of specific tests attributes, across multiple tests.

Filtered Views

You can define and apply filters to the PTF tree view. This enables you to view only tests that meet specific criteria within various categories, including:

- Test properties: Test Name, Test Description, Updated By, Update Date/Time, Version.
- Step properties: Recognition, Component, Page, Record, Field.
- Tests flagged by the test maintenance report: UserID, Project Name, Seq.
- Tests flagged by the test coverage report: UserID, Project Name.
- Application Designer project.

Usability Enhancements

Usability enhancements include:

- A search option in the Quick Open window that enables you to search for and open multiple items at one time.
- A rename option that enables you to rename folders or tests in the PTF tree view.
- The ability to activate/inactivate multiple test steps at one time.
- A Run from Step option that enables you to restart a shell test from a specific step. This option is available through the Test menu as well as from the command line.
- Recognition field enhancements:
 - Splitting the Recognition field into two separate fields: Recognition and Parameters.
 - Adding support for specific wildcard characters, to provide flexibility for changing recognition strings, especially abstract/non-descriptive page indexes. These include ~ (like), # (single numeric digit), ? (single alpha digit), and * (any character string).
- Enhancements that make recording tests and finding previously recorded tests even easier:
 - In the Recorder toolbar, step icons have been replaced with a single drop-down list box.
 - You can append scroll variables at record time.
 - You can move tests into a PeopleTools project directly from the PTF Client.

Reporting Enhancements

Reporting enhancements include the following items:

- When generating PTF PIA reports, you can specify a PTF parent folder as part of the search criteria, which enables you to produce reports by folder for all reports.
- A new Test Matrix report, which provides information about the hierarchical relationships for a given test, listing its top level parent test, and all child tests.

Accessibility

This section describes accessibility improvements.

WCAG 2.0 Support

PeopleTools 8.54 makes it possible for PeopleSoft applications to conform to WCAG 2.0 AA regulatory guidelines. Support for WCAG 2.0 means PeopleSoft applications built on PeopleTools 8.54 will conform to the latest accessibility regulations. PeopleTools 8.54 also makes it possible for customers to maintain this level of conformance when they create or modify pages.

Web Content Accessibility Guidelines (WCAG) are part of a series of guidelines published by the W3C's Web Accessibility Initiative. Their goal is to make content accessible, primarily for disabled users but also for all user agents, including highly limited devices, such as mobile phones. The current version (2.0) of the guidelines is also an ISO standard: ISO/IEC 40500:2012.

WCAG 2.0 is an international standard used in most countries that enforce accessibility regulations. The new standard provides additional requirements to address new web technologies and has become the standard by which many organizations monitor software compliance. WCAG 2.0 extends standards described in WCAG 1.0 as well as the U.S.-specific regulations described in section 508 of Federal access standards.

Note: Previous versions of applications running on PeopleTools 8.54 will not automatically conform to all aspects of WCAG 2.0. Modifications to earlier applications may be necessary to conform to specific WCAG 2.0 guidelines.

PeopleSoft Interaction Hub

This section describes enhancements to unified navigation for the PeopleSoft Fluid interface.

Unified Navigation for the PeopleSoft Fluid User Interface

Unified navigation now federates PeopleSoft application nodes for the fluid user experience as well as classic components, eliminating both the need to set up remote content references manually and the need to synchronize security between applications in fluid pages. With unified navigation, fluid features such as the Navigation Bar (Navbar) can expose the remote portal registry (both fluid and classic targets).

Unified navigation supports the following fluid features:

- Navigation Bar (NavBar) unifies the menu, which will be able to show unified local and remote folders and content references of both fluid and classic components. The NavBar merges multiple remote folders and content references, displaying widgets from across federated PeopleSoft applications. For example, a user could view NavBar menu items from PeopleSoft FSCM or PeopleSoft ELM while working on a page from PeopleSoft HCM. The NavBar can also display favorites and recently visited pages from across federated application sources.
- When a user launches a remote page, the header and other links will be based on the PeopleSoft Interaction Hub system context, which ensures that common header styles are maintained across all federated PeopleSoft applications.
- Users can personalize remote content homepages.
- Users can search across federated PeopleSoft content and bring in remote tiles to a home page.
- Runtime security will be in effect for remote tiles, eliminating the need for manual security synchronization.
- Remote related actions and related content across different PeopleSoft applications are in effect. If a user opens a page from a remote content provider, the related actions will remain in effect, providing consistent navigation behavior.

Unified navigation has also been enhanced to support configuration of multiple instances of the same PeopleSoft application (for example, multiple instances of PeopleSoft HCM). This addresses the need of some customers who deploy application modules or products in separate physical environments. For example, a customer might have different environments based on product areas or geographical regions.

Unified navigation breaks down many of the navigation barriers between PeopleSoft applications and enables users to access pages and content as needed. It provides PeopleSoft customers with a user experience that is aligned with their business processes, free of product partitions.

Document Change History

This section describes the changes made to this document after the initial posting. Please make a note of these changes if you have downloaded previous versions.

Date	Change to Document
May 23, 2014	Version 1 posted.