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# PeopleTools 8.60: Tree Manager

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October 2022

PeopleTools 8.60: Tree Manager  
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# Preface

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## Understanding the PeopleSoft Online Help and PeopleBooks

The PeopleSoft Online Help is a website that enables you to view all help content for PeopleSoft applications and PeopleTools. The help provides standard navigation and full-text searching, as well as context-sensitive online help for PeopleSoft users.

### Hosted PeopleSoft Online Help

You can access the hosted PeopleSoft Online Help on the [Oracle Help Center](#). The hosted PeopleSoft Online Help is updated on a regular schedule, ensuring that you have access to the most current documentation. This reduces the need to view separate documentation posts for application maintenance on My Oracle Support. The hosted PeopleSoft Online Help is available in English only.

To configure the context-sensitive help for your PeopleSoft applications to use the Oracle Help Center, see [Configuring Context-Sensitive Help Using the Hosted Online Help Website](#).

### Locally Installed Help

If you're setting up an on-premise PeopleSoft environment, and your organization has firewall restrictions that prevent you from using the hosted PeopleSoft Online Help, you can install the online help locally. See [Configuring Context-Sensitive Help Using a Locally Installed Online Help Website](#).

### Downloadable PeopleBook PDF Files

You can access downloadable PDF versions of the help content in the traditional PeopleBook format on the [Oracle Help Center](#). The content in the PeopleBook PDFs is the same as the content in the PeopleSoft Online Help, but it has a different structure and it does not include the interactive navigation features that are available in the online help.

### Common Help Documentation

Common help documentation contains information that applies to multiple applications. The two main types of common help are:

- Application Fundamentals
- Using PeopleSoft Applications

Most product families provide a set of application fundamentals help topics that discuss essential information about the setup and design of your system. This information applies to many or all applications in the PeopleSoft product family. Whether you are implementing a single application, some combination of applications within the product family, or the entire product family, you should be familiar with the contents of the appropriate application fundamentals help. They provide the starting points for fundamental implementation tasks.

In addition, the *PeopleTools: Applications User's Guide* introduces you to the various elements of the PeopleSoft Pure Internet Architecture. It also explains how to use the navigational hierarchy, components, and pages to perform basic functions as you navigate through the system. While your application or implementation may differ, the topics in this user's guide provide general information about using PeopleSoft applications.

## Field and Control Definitions

PeopleSoft documentation includes definitions for most fields and controls that appear on application pages. These definitions describe how to use a field or control, where populated values come from, the effects of selecting certain values, and so on. If a field or control is not defined, then it either requires no additional explanation or is documented in a common elements section earlier in the documentation. For example, the Date field rarely requires additional explanation and may not be defined in the documentation for some pages.

## Typographical Conventions

The following table describes the typographical conventions that are used in the online help.

<b><i>Typographical Convention</i></b>	<b><i>Description</i></b>
<b>Key+Key</b>	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For <b>Alt+W</b> , hold down the <b>Alt</b> key while you press the <b>W</b> key.
... (ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe ( ).
[ ] (square brackets)	Indicate optional items in PeopleCode syntax.
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object.  Ampersands also precede all PeopleCode variables.
⇒	This continuation character has been inserted at the end of a line of code that has been wrapped at the page margin. The code should be viewed or entered as a single, continuous line of code without the continuation character.

## ISO Country and Currency Codes

PeopleSoft Online Help topics use International Organization for Standardization (ISO) country and currency codes to identify country-specific information and monetary amounts.



ISO country codes may appear as country identifiers, and ISO currency codes may appear as currency identifiers in your PeopleSoft documentation. Reference to an ISO country code in your documentation does not imply that your application includes every ISO country code. The following example is a country-specific heading: "(FRA) Hiring an Employee."

The PeopleSoft Currency Code table (CURRENCY\_CD\_TBL) contains sample currency code data. The Currency Code table is based on ISO Standard 4217, "Codes for the representation of currencies," and also relies on ISO country codes in the Country table (COUNTRY\_TBL). The navigation to the pages where you maintain currency code and country information depends on which PeopleSoft applications you are using. To access the pages for maintaining the Currency Code and Country tables, consult the online help for your applications for more information.

## Region and Industry Identifiers

Information that applies only to a specific region or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

### Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in the PeopleSoft Online Help:

- Asia Pacific
- Europe
- Latin America
- North America

### Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in the PeopleSoft Online Help:

- USF (U.S. Federal)
- E&G (Education and Government)

## Translations and Embedded Help

PeopleSoft 9.2 software applications include translated embedded help. With the 9.2 release, PeopleSoft aligns with the other Oracle applications by focusing our translation efforts on embedded help. We are not planning to translate our traditional online help and PeopleBooks documentation. Instead we offer very direct translated help at crucial spots within our application through our embedded help widgets. Additionally, we have a one-to-one mapping of application and help translations, meaning that the software and embedded help translation footprint is identical—something we were never able to accomplish in the past.

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## Using and Managing the PeopleSoft Online Help

Select About This Help in the left navigation panel on any page in the PeopleSoft Online Help to see information on the following topics:

- Using the PeopleSoft Online Help.
- Managing hosted Online Help.
- Managing locally installed PeopleSoft Online Help.

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## PeopleTools Related Links

[PeopleTools 8.60 Home Page](#)

[PeopleSoft Search and Kibana Analytics Home Page](#)

"PeopleTools Product/Feature PeopleBook Index" (Getting Started with PeopleTools)

[PeopleSoft Online Help](#)

[PeopleSoft Information Portal](#)

[PeopleSoft Spotlight Series](#)

[PeopleSoft Training and Certification | Oracle University](#)

[My Oracle Support](#)

[Oracle Help Center](#)

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## Contact Us

Send your suggestions to [psft-infodev\\_us@oracle.com](mailto:psft-infodev_us@oracle.com).

Please include the applications update image or PeopleTools release that you're using.

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	<a href="#">LinkedIn</a>



## Chapter 1

# Getting Started with PeopleSoft Tree Manager

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## PeopleSoft Tree Manager Overview

This document discusses PeopleSoft Tree Manager, the PeopleTools feature you use to create and maintain hierarchical relationships, such as trees. To take full advantage of the information covered in this book, you should have a basic understanding of how to use PeopleSoft applications.

With PeopleSoft Tree Manager, you represent data graphically to show a hierarchy. Other parts of the system can use the trees that you have defined for hierarchical information — for reports, ChartField combination editing, OLAP, summary ledgers, or security. You can update trees with specifically designed tools, and your changes are then automatically applied throughout the system. You can also use PeopleCode to manipulate trees.

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**Warning!** Be cautious about using your browser's **Back** button in PeopleSoft Tree Manager, as you may receive unexpected results. Save changes to your trees before using the **Back** button.

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**Note:** Query Access trees are not maintained or viewed by PeopleSoft Tree Manager or Tree Viewer. Those trees can be viewed or maintained by using the Query Access Manager, which is located under the **Security > Query Security** menu option.

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The Tree Viewer module provides read-only access for all trees. Administrators can provide users either PeopleSoft Tree Manager or the Tree Viewer module.

The following list explains the PeopleSoft Pure Internet Architecture pages that are included in PeopleSoft Tree Manager and provides cross-references to the corresponding documentations:

<b>Term</b>	<b>Definition</b>
Tree Manager page	See <a href="#">Opening Trees</a> .
Find Value page	See <a href="#">Searching for Nodes or Detail Values</a> .
Insert Sibling Node page	See <a href="#">Inserting Nodes</a> .
Insert Child Node page	See <a href="#">Inserting Nodes</a> .
Node Properties page	See <a href="#">Switching Node Levels</a> .

<b>Term</b>	<b>Definition</b>
Detail Value Range page	See <a href="#">Working with Detail Values</a> .
Tree Definition and Properties page	See <a href="#">Modifying Tree Definitions</a> . See <a href="#">Defining Basic Attributes</a> .
Tree Levels page	See <a href="#">Defining Tree Levels</a> .
Configure User Options page	See <a href="#">Setting Display Options</a> .
Node Navigation page	See <a href="#">Using Navigation Options</a> .
Tree Print Format page	See <a href="#">Printing Trees</a> , <a href="#">Exporting Trees to PDF Files</a> .
Tree Structure Properties page	See <a href="#">Defining Detail Tree Structures</a> .
Levels page	See <a href="#">Defining Levels</a> .
Nodes page	See <a href="#">Defining Node Properties</a> .
Details page	See <a href="#">Defining Tree Details</a> .
Root Node page	See <a href="#">Adding a Root Node</a> .
Performance Options page	See <a href="#">Page Used to Select Performance Options</a> .
Copy Tree page	See <a href="#">Copying Trees</a> .
Tree Viewer page	See <a href="#">Viewing Trees</a> .
Batch Report page	See <a href="#">Reviewing Audit Results</a> .

## Overview of PeopleSoft Trees

Trees depict hierarchical structures that represent a group of summarization rules for a particular database field. For example, a tree can specify how your manufacturing locations should be summarized, or *rolled up*, for reporting purposes. Or a tree can show the reporting relationships within an organization by specifying how the individual department should be summarized into territories, territories into regions, and regions into countries. Similarly, a tree can categorize items in a catalog.

The summarization rules depicted in a tree apply to the detail values of a particular field: vendors, departments, customers, or other values that you define. These detail values are summarized into *nodes* on

the tree. The nodes may also be organized into *levels* to logically group nodes that represent the same type of information or level of summarization.

For example, the values of the **DEPTID** field identify individual departments in your organization. You use PeopleSoft Tree Manager to define the organizational hierarchy that specifies how each department relates to the others — departments 10700 and 10800 report to the same manager, department 20200 is part of a different division, and so on. In other words, you build a tree that mirrors the existing organizational hierarchy.

Your chart of accounts is another prime candidate for trees. You can create trees that specify how you want to roll up accounts into summary ledgers or reports. You can create multiple trees, providing different roll-ups for different views of your account data.

After you have defined an organizational tree, the system can use it in a variety of ways. For example:

- Reporting

When you want a report that summarizes results for a particular division or region, the system can check against the tree to determine which departments to include. Without the tree, you'd have to explicitly specify the departments that you wanted every time you created a report.

- Summary ledgers

To create a summary ledger that summarizes account balances by department, the system refers to the tree to determine the DEPTID values to include in the summarized ledger entries. (Summary ledgers are used only in PeopleSoft Financials applications.)

- Security

You can restrict user access to their divisions. The application tables tell the system what department the user is in; the tree tells it what other departments are in the same division. (This use is appropriate for PeopleSoft Human Resources applications only.)

Additionally, you can create different organizational trees for different purposes. Suppose you want to group departments together differently for reporting and for security. Maybe you want to include data from regional offices in your summary reports, but you do not want to give corporate users access to regional employee records. In this case, you'd create two trees – a “departmental” tree that groups departments by function, regardless of region, and a “regional” tree that groups departments by location. Then you'd use one for reporting and the other for security.

## Advantages of PeopleSoft Trees

By building trees, you give the system a single place to look for summarization rules. This centralization enables you to define rules once and then use them throughout the system. For example, different reports, ledgers, and security profiles might refer to parts of your company's organizational chart. All these objects can refer to the same predefined tree.

Trees make it easier to select and update values in reports, ledgers, or security profiles. Rather than specify departments 8202, 8203, 8513, 8515, and 8663 in a report, you can specify the Lafayette branch, which includes all these departments according to the tree. When the organizational structure changes, you update the tree once rather than updating an untold number of reports, ledgers, security profiles, and so on.

Another advantage of trees is that they present summarization rules visually. Looking at a tree through PeopleSoft Tree Manager, you can easily see how the values relate to each other.

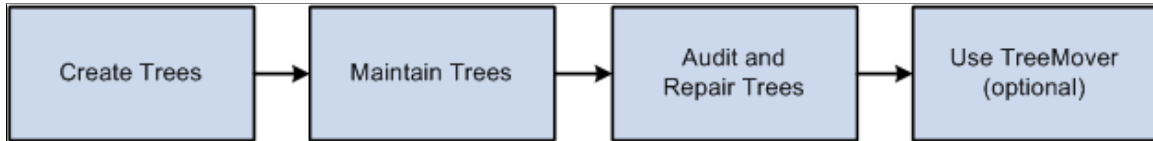
## Related Links

"Understanding Restrictions on Method and Function Use" (PeopleCode Developer's Guide)

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## PeopleSoft Tree Manager Business Processes

This process flow illustrates the PeopleSoft Tree Manager business processes.



Each business process—that is illustrated in the previous process flow—is discussed in the appropriate topics of this product documentation.

See [Understanding Steps to Create Trees](#), [Maintaining Trees](#), [Understanding the Auditing and Repairing of Trees](#), [Understanding TreeMover](#).

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## PeopleSoft Tree Manager Implementation

PeopleSoft Tree Manager is automatically installed with your PeopleTools installation.

Before creating a tree, you should plan the tree that you want to create. You should also know which data you want to expose in the tree.

After you have planned your tree, you can create the tree structure. After you have created the tree structure, you can create the tree.

### Other Sources of Information

This topic provides information to consider before you begin to use PeopleSoft Tree Manager.

In addition to implementation considerations presented in these topics, take advantage of all PeopleSoft sources of information, including the installation guides, release notes, product documentations, red papers, the **Updates + Fixes** area of My Oracle Support, and PeopleSoft's curriculum courses.



## Chapter 2

# Introduction to PeopleSoft Tree Manager

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## Working with Tree Concepts

This topic provides an overview of working with tree concepts.

## Understanding Tree Concepts

This topic discusses general concepts used by PeopleSoft Tree Manager, such as levels, effective dates, and setIDs.

### Tree Levels

Levels provide a way to organize tree nodes. In most trees, all nodes at the same level represent the same kind of information. For example, in a tree that reflects the organizational hierarchy, all division nodes appear on one level and all department nodes on another. Similarly, in a tree that organizes your product catalog, the nodes representing individual products might appear on one level and the nodes representing product lines on the next higher level.

Sometimes you want to be able to identify all of the nodes on the same level as a group, even when they do not share the same parent. For example, you might create a PeopleSoft nVision layout that summarizes the data for a division, then define a PeopleSoft nVision scope that creates one report instance for each division, regardless of what company it is in. To allow you to refer to all the nodes at a level, PeopleSoft Tree Manager enables you to name each level. You will use the level name when you define the scope for your PeopleSoft nVision report (rather than identifying all the nodes individually). Naming your levels gives you another way to “slice” the data in the tree. Level names can appear next to the node description.

This example illustrates a tree with levels.

The screenshot shows the 'Tree Manager' interface. At the top, it displays 'Tree Manager' in blue. Below this, there are several fields: 'BU or UKV' with value 'QEBU1', 'Last Audit' with value 'Valid Tree', 'Effective Date' with value '04/25/2000', 'Status' with value 'Active', 'Tree Name' with value 'QE\_PROJECTS', and 'Project Data'. Below these fields are several links: 'Save As', 'Close', 'Tree Definition', 'Display Options', 'Print Format', and 'Export to PDF'. The main area shows a tree structure starting with 'ALL\_PROJECTS > 00001 > MILT\_SAT'. Below this, there is a navigation bar with 'Collapse All', 'Expand All', 'Find', 'First Page', '13 of 60', and 'Last Page'. The tree structure is as follows:

- ALL\_PROJECTS - All NASA Space Projects
  - 00001 - Satellite Projects
    - COMM\_SAT - Commercial Satellites
    - MILT\_SAT - Military Satellites
      - MILT\_SPEC - Obtain Military Specifications
      - MILT\_DESIGN - Design Military Satellite
      - MILT\_CONST - Construct Military Satellite
      - MILT\_TEST - Test Military Satellite
      - MILT\_HANDO - Handover of Military Satellite
  - 00002 - Space Shuttle Projects
  - 00003 - Space Station Projects
  - 00004 - Telescope Projects
  - 00005 - Space Probe Projects

For each tree structure, you can determine how trees use levels:

- When levels are not used the nodes in the tree have no real hierarchy or reporting structure but do form a logical summarization structure.
- Strictly enforced levels mean that the named levels describe each node's position in the tree.

This is natural for most hierarchies. Strict levels have the following advantages:

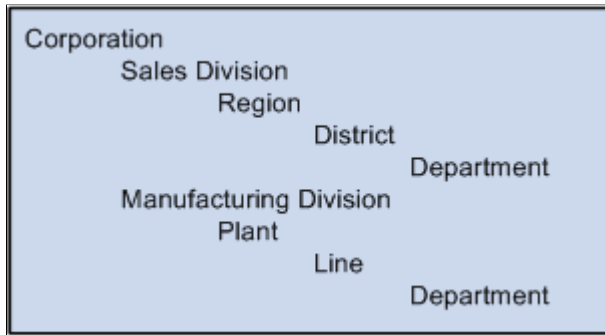
- You can skip a level if a portion of the hierarchy does not have a node at that level.
- The appearance of your tree more precisely matches the real-life hierarchy.
- If you use summary ledgers in PeopleSoft General Ledger, you can also create summary trees, which are based on levels in the corresponding detail tree.
- If you decide later that you need to change a tree from strict levels to loose levels, you can do so.

You cannot change a loose level tree to strict levels, because the level names are not connected to specific positions in the tree.

- Loosely enforced levels mean that the nodes at the same visual level of indentation do not all represent the same kind of information, or nodes representing the same kind of information appear at multiple levels.

With loosely enforced levels, you assign a level to each node individually; the level is not tied to a particular visual position.

This diagram illustrates an example of loosely enforced levels.



In the previous example, the first two levels are clear: Corporation and Division. However, within the Sales and Manufacturing divisions, the structure is different. This tree could be created with strict levels, but would become distorted because the Plant and Line levels would need to appear either "above" or "below" the Region and District levels when in fact they are parallel. You could define a strict level tree with a level name such as *Plant/Region* or even *Level3*, but this makes it harder to identify just the regions, districts, and so on for reporting or other purposes. With loose levels, the plants within the Manufacturing division can be referred to as a level independent of the regions in the Sales division.

In a loose level tree, the level is an attribute of the node and is only loosely related to its position. The level becomes a way of identifying a group of nodes that serve a common function within the organization.

For most trees, you will want to use levels. Consider the following reasons before selecting the *Level Not Used* option:

- You cannot add levels to a tree later.
- If you use summary trees (generally used with PeopleSoft General Ledger), levels are required.
- PeopleSoft nVision enables you to build a report by nPloding the tree from a specified node to a specified level.

This makes levels very useful on account hierarchies, for example.

## Effective Dates

Using effective dates with trees enables you to specify new objects, departments, reporting relationships, or organizational structures in advance and have them take effect automatically. You can also use trees with past, present, or future effective dates when reporting on current or historic data.

Using Effective Date is required for all types of trees.

## SetIDs

Most data in control tables is stored by setID. Trees can be identified by four key values: setID, user key value, tree name, and effective date.

When using a setID as a key value for your tree, you should assign the same setID as the record on which your tree is built.

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**Note:** You should not use key value for a newly created trees.

---

## Related Links

[Understanding Steps to Create Trees](#)

[Working with Effective Dates and Trees](#)

[Associating Trees with Additional SetIDs](#)

## Using Nodes

Nodes define the hierarchical relationship within the tree. Nodes can be either categories (as in a group of assets) or items that need to be placed in a relationship with other items, such as an item in a catalog.

Each detail value reports to a tree node at the next higher level of the organization. Each tree node represents the group of detail values that report to it. Referring to the node is a shorthand way of referring to the group of detail values under it. For example, if a report refers to the Office of the President, it includes data from all the detail values under the Office of the President node — including the detail values under the Human Resources department, because Human Resources reports to the Office of the President.

In turn, each tree node reports to another tree node at a higher level of organization until you reach the top level of the hierarchy, called the root node.

## Family Tree Terminology

Terminology derived from the idea of a family tree is used when talking about trees. The nodes that report to the root node are called its *children*. They are also called *child nodes*. The root node is their *parent*. Nodes that have the same parent are called *siblings*.

## Using Detail Values (Leaves)

Detail values, or *leaves*, link a roll-up structure to the supporting detail. For example, the nodes in an account tree are not the actual accounts but categories of accounts. Using this example, the account tree has a node called Assets, with detail values specifying a range of accounts from 1000 to 1999 rolling up to it.

The tree illustrated in the following example shows summarization rules for the **PERSONAL\_DATA** field. In other words, it is an organizational chart for the offices in a company's headquarters. Individual offices, such as 8200, represent the lowest level of organization and appear at the far right of the tree. The leaves representing the offices are called *detail values*. Detail values have leaf icons and square brackets [ ] surrounding their names.

This example illustrates a personal data tree with detail values.

**Tree Manager**

SetID	QEDM1	Last Audit	Valid Tree
Effective Date	05/05/1997	Status	Active
Tree Name	QE_PERS_DATA	Personal Data Tree	

[Save As](#) [Close](#)    [Tree Definition](#) [Display Options](#) [Print Format](#) [Export to PDF](#)

[Collapse All](#) | [Expand All](#)    [Find](#)    First Page 8 of 132 Last Page

- 00001 - Corporate Headquarters
- [8200] - ALBRIGHT
- [8300] - VINCENT
- [8400] - WALTERS
- [8500] - DUNCAN
- [8600] - ELIAS
- 10100 - Office of the President
- 20100 - Office of the President (CDN)

Notify

## Related Links

[Working with Tree Nodes](#)

[Working with Tree Branches](#)

---

## Understanding Types of Trees

This topic provides an overview of understanding types of trees.

### Understanding Standard Detail Trees

In the most basic type of tree, the *lowest* level – that is, the level farthest to the right in the tree – holds detail values. The next level is made up of tree nodes that group together the detail values, and each subsequent level defines a higher-level grouping of the tree nodes. This kind of tree is called a *detail tree*.

In a detail tree, the lowest level in the hierarchy consists of the detail values, which are represented by leaves; (these trees are sometimes called *summer trees*.) You can use a detail tree to represent account hierarchies, product hierarchies, business unit hierarchies, and so on.

Detail trees are used most often for nVision reporting from the General Ledger.

This example illustrates a detail tree.

In this example, the Corporate Headquarters node is at the highest level and it has details such as Albright, Vincent, Walters, and so on. These details are at the lowest level of hierarchy and in this case denote individual employees in the Corporate Headquarters. Apart from details, this tree also has nodes such as Office of the President and Office of the President (CDN), which itself contains details.

## Understanding Dynamic Detail Trees

In a normal detail tree, the detail values that fall under each node are defined by a specific value or range of values. With a dynamic detail tree, detail values are determined by matching the node name with a field on the detail value table. The system dynamically determines appropriate values from the detail value table at the time it uses the tree. Instead of specific or range of values, the detail values appear as blank on the PeopleSoft Tree Manager display.

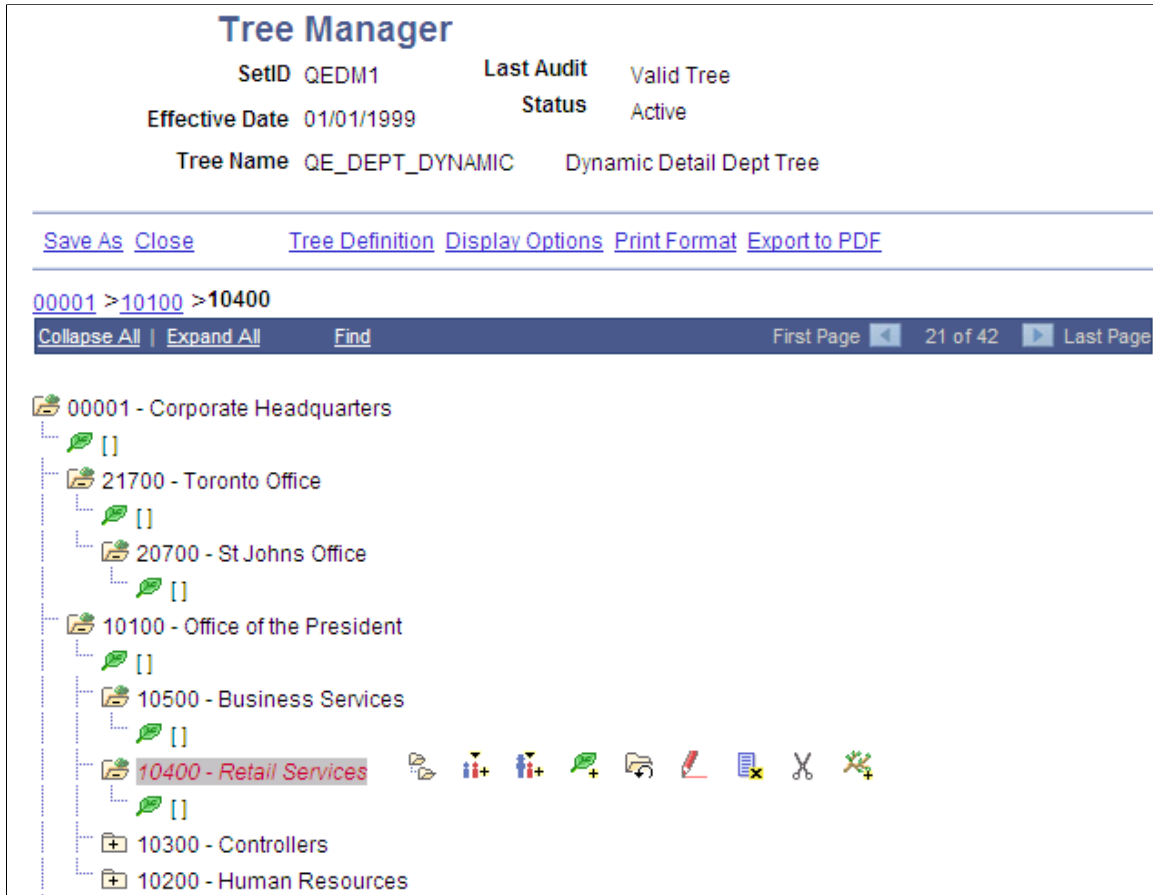
---

**Note:** Do not create trees that contain a combination of dynamic details and range details if the tree is used by PeopleSoft Query or PeopleSoft nVision. Trees with this combination of details may yield incorrect reporting results when used with these reporting tools.

---

For dynamic detail trees, the parent node value defines part of the primary key for the detail values.

This example illustrates a dynamic detail tree.



In the preceding illustration, each node represents a value of the **DEPARTMENT\_ID** field. The structure of the tree determines the relationships between departments and their groups, so that your reports can roll up department data. Departments are not the lowest level of detail, though. Each department consists of employees, and when you assign a department cost, you assign it to a particular department *and* an employee. These two fields, **DEPARTMENT\_ID** and **EMPLID**, are both key fields for the department data. So to capture these costs, the department tree needs to group the employees for each department. That is where the detail values come in.

The detail values in this tree represent values for **EMPLID**. Rather than listing each **EMPLID** value separately, however, you tell PeopleSoft Tree Manager to use all of the employees associated with the parent **DEPARTMENT\_ID**. For example, if you ask for a report on the RETAIL SERVICES department, the system will roll up the data whose **DEPARTMENT\_ID** is RETAIL SERVICES and whose **EMPLID** is any value.

You can select to display all detail values for a selected node or to display detail values based on the tree's current effective date.

See [Defining Summary Tree Details](#).

## Understanding Node-Oriented Trees

In standard detail trees, the detail values represent data values from a database field, and the tree nodes represent roll-up points for detail values. The nodes have no meaning outside the context of the tree. However, you can also create *node-oriented trees*.

Node-oriented trees are based on a detail structure, but the detail values are not used. For this type of tree, the tree nodes represent the data values from the database field. The system uses node-oriented trees for special purposes. For example, PeopleSoft HRMS applications use the Departmental Security tree to give users access to information only about employees in their departments.

This example illustrates a node-oriented tree.

The screenshot displays the Tree Manager interface. At the top, it shows the title "Tree Manager" and several fields: SetID QEDM2, Last Audit, Valid Tree, Effective Date 01/01/2001, Status, Active, Tree Name QE\_DEPT\_SEC, and DEPART SECURITY. Below this, there are navigation links: Save As, Close, Tree Definition, Display Options, Print Format, and Export to PDF. The breadcrumb path is G80STCORP > FLORIDA > F02. A status bar indicates "Collapse All | Expand All | Find" and "First Page 60 of 7274 Last Page". The tree structure is as follows:

- G80STCORP - CORP Level Node
  - FLORIDA - Florida
    - F01 - Central Florida
    - F02 - Management (Atlanta)
      - F026089692 - Treasury
      - F026089691 - Treasurer's Department
      - F029691 - Treasurer's Department
      - F020608969 - Closed - Treasurer's Dept
    - F05 - Nature Coast
      - F059999 - Default for Conversion
      - F050590099 - Elfers Office
      - F050880099 - Chelsea Place Office

**Note:** In this example, Florida is a node at the top level which has subnodes of Central Florida, Atlanta, Nature Coast, and so on. These nodes in turn have nodes such as Treasury, Treasurers Department, and so on. None of the nodes have leaves.

Node-oriented trees have no leaves, and are sometimes called *winter trees*. Instead, each node is a possible value of the **DEPTID** field.

## Understanding Summary Trees

*Summary trees* are generally used for General Ledger reporting. A summary tree provides an alternative grouping of the nodes from a detail tree without duplicating its entire structure. In a summary tree, the detail values are tree nodes from an existing detail tree rather than values from a database field. The tree groups the nodes from a specific level in the detail tree differently from the way it groups the higher levels in the detail tree itself.

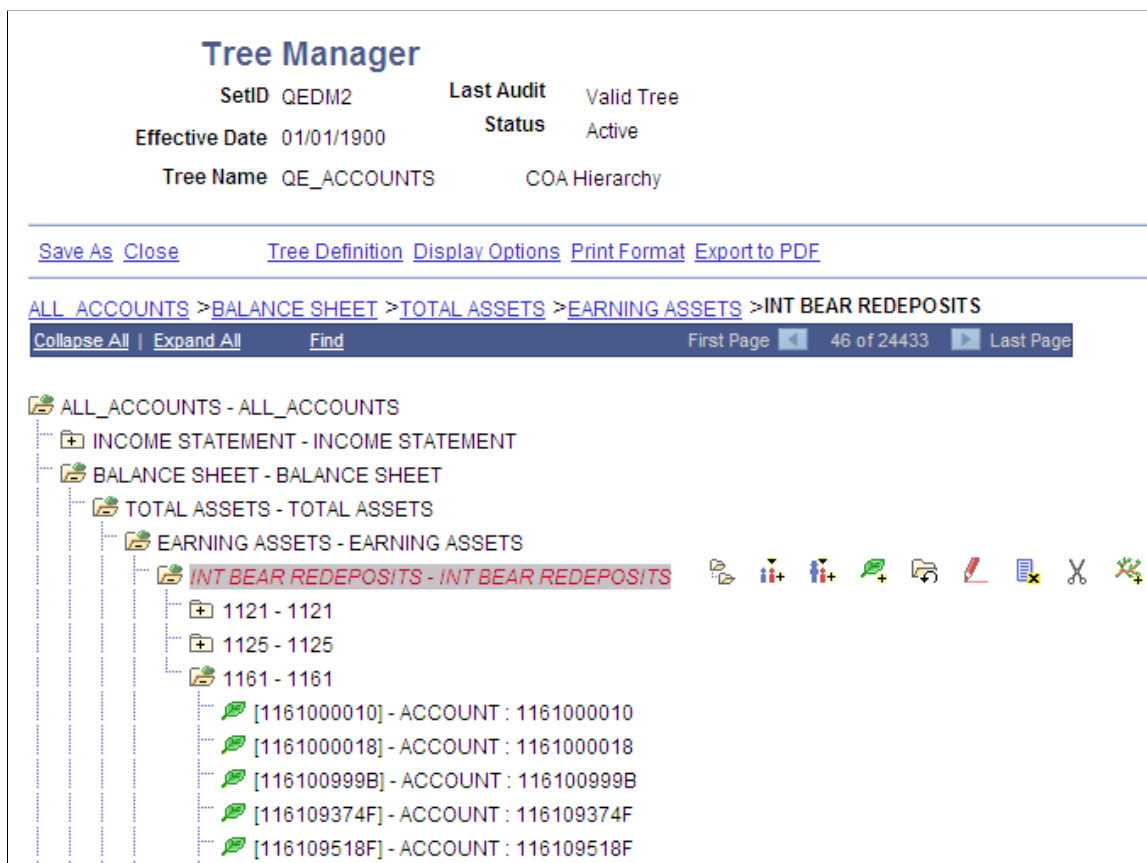


For example, suppose you want to roll up your departmental hierarchy differently for two reports. The first report shows the reporting structure, so you want to group your departments according to the division to which they report. The second report is a financial report, showing profit centers, overhead centers, and production centers. From the group level down, the two hierarchies are the same.

You have two options:

1. Create two complete detail trees that are identical from the group level down.
2. Create one complete detail tree, then create a summary tree whose detail values are the group-level nodes on the first tree.

This example illustrates a summary tree.



When you use a node from a summary tree in a report or summary ledger, the system refers back to the detail tree to determine which detail values report to that node. For example, suppose you want to report on production centers. You have created a summary tree that shows which groups are production centers, and you pick the Production Center node. The summary tree shows that the Engineering group and the Manufacturing group (among others) are production centers, but it does not show which departments are in these groups. The system uses the detail tree to determine the departments in the group.

Summary trees make it easier to maintain trees. If you change the lower part of the tree, you need to update only one tree.

The most common use of summary trees is to create summary ledgers in PeopleSoft Financial Data Management applications. You create summary trees based on your basic **ChartFields** to create alternative roll-ups. You create reports based on the various summary trees to view your financial data from a variety of perspectives.

## Working with Effective Dates and Trees

This topic provides an overview of working with effective dates and trees.

### Understanding Interactions Between Tree and User Data Effective Dates

User data are information collected from customers. When user data also has an effective date on key record, PeopleSoft Tree Manager checks that date to determine which dated record item belongs in the current dated tree. When only one dated item is in the user table, then the date determines whether that item is available for use in the tree at all.

Trees and user data differ in how effective dates are considered in respect to the current date and when the tree and the data come into scope. The rules are:

- The tree's effective date is the *good through date* for the tree's representative organization.
- The user data item's effective date is the *good from date* for the user data.

Therefore, in a particular tree, the nodes and details valid for that tree must have an effective date on the user data record earlier or the same as the effective date on the tree.

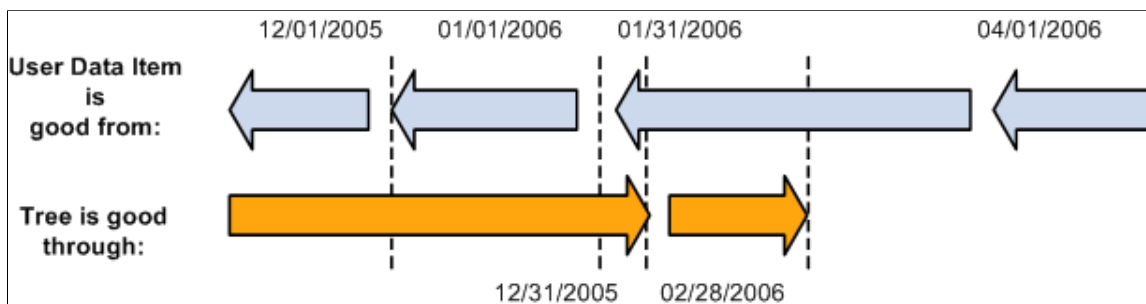
The following table presents an example of an effective-dated tree with a user table that has three effective-dated records for the same item.

<b><i>Tree Effective Date</i></b>	<b><i>User Item Effective Date</i></b>	<b><i>User Data Available to Tree?</i></b>
12-31-2005	12-01-2005	Yes
12-31-2005	01-01-2006	No
12-31-2005	01-31-2006	No
12-31-2005	04-01-2006	No

The following table shows the actions when the tree is copied to a new effective date, with the same user data records.

<b><i>Tree Effective Date</i></b>	<b><i>User Item Effective Date</i></b>	<b><i>User Data Available to Tree?</i></b>
02-28-2006	12-01-2005	Yes
02-28-2006	01-01-2006	Yes
02-28-2006	01-31-2006	Yes
02-28-2006	04-01-2006	No

This diagram illustrates a graphical representation of user data and tree effective dates.



## Using Effective-Dated User Records

PeopleSoft trees are a hierarchical structure made up of the tree's definition along with the nodes and details (leaves) that form the parent-child relationships in the tree. The nodes and details are tied in to a user record as defined in the tree structure.

When the user record has an effective date as a part of the record's key, then that effective date determines the criteria used for details and nodes available for use in the tree.

### Related Links

"Using Effective Dates" (Applications User's Guide)

## Using Effective-Dated Trees

Trees must have an effective date. Effective dates on trees show planned changes in the hierarchy the tree represents.

For example, in the HR Department tree, you want to add a new Hardware department effective 09/01/2001. You do this by copying the current HR Department tree to a new effective date of 09/01/2001, opening the new tree, and adding the Department node for Hardware.

When the current date reaches 09/01/2001, then the HR Department tree with the Hardware department will become effective for application and reporting purposes, and the previous effective date version of the HR Department tree will be a copy for historical purposes.

---

## Associating Trees with Additional SetIDs

PeopleSoft applications store information in two types of tables: transaction tables and control tables. Information in transaction tables is typically stored by business unit, while control table information is stored by a set identifier, commonly called the setID.

Transaction tables store data about day-to-day business activities. As such, these tables are updated frequently.

Control tables store information that defines the accounting and organizational structures and processing rules that are used when business transactions are entered into PeopleSoft applications. Control tables include master lists, such as customers, vendors, products, items, and charts of accounts. These tables are generally static, and many are effective-dated.

A tableset is a subset of data within the control tables that defines the accounting structure and processing rules for a particular business unit or group of business units.

Trees are typically hierarchies built on top of control tables, and so you usually will want to key your tree by setID if the underlying control table is keyed by setID.

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**Note:** Because PeopleSoft Projects data is stored in tables keyed in by business unit rather than setID, PeopleSoft Project trees may be keyed by either setID or business unit, depending on the tree's function.

---

See the *PeopleSoft Application Fundamentals* documentation.

## Sharing Trees Across SetIDs

Use the Tree page to associate a specific tree with a given set control value.

Navigation:

**PeopleTools > Utilities > Administration > Maintain TableSet Controls > Tree**

This example illustrates the fields and controls on the Tree page.

*Tree Name	Description	*SetID	Short Description
QE_QRY_TREE		QEDM1	Setid 1

PeopleSoft applications use the default setID on the tableset Record Group page to determine which trees a business unit can access. This default setID is established when the business unit is created. However, if you want a business unit to be able to access a particular tree created under a setID other than the default setID, you can specify the tree on this page.

The setID you define for a tree should typically match the setID defined for the underlying record.

The Record Group page of the TableSet Controls component defines which setID is used for a specific record group.

For example, if the PRODUCT\_TBL record is part of REC\_GROUPA, and on the Record Group page you have associated BU = CCB, Rec. Group = REC\_GROUPA, and SetID = FS, then you should also set up any trees based on PRODUCT\_TBL so that BU = CCB and uses SetID = FS.

## Working with the Multiuser Environment

When the multiuser environment is enabled, PeopleSoft Tree Manager enables multiple users to work in the same environment and on the same tree or branch without the risk of losing individual work due to version control.

**Note:** PeopleSoft delivers PeopleSoft Tree Manager with the multiuser environment *disabled*. When you enable the multiuser environment for PeopleSoft Tree Manager, you also enable the multiuser environment for Query Access Manager.

See "Building Query Access Group Trees" (Security Administration), "Using Query Access Group Trees" (Query).

The following example explains how PeopleSoft Tree Manager works when the multiuser environment is enabled:

User A, User B, and User C open the QE\_ACCOUNTS tree at around the same time and can view only the tree without making any changes. During this time, *Mode: Display* appears at the top of the tree's page for all users, notifying them that the tree is in *display mode*. If User A wants to make changes to the tree, she must reserve the tree for editing. After she reserves the tree, *Mode: Edit* appears at the top of her QE\_ACCOUNTS tree page, confirming that the tree is in *edit mode* for herself only. However, *Mode: Display (Checked Out by User A)* appears at the top of User B's and User C's QE\_ACCOUNTS tree page, notifying these users that the QE\_ACCOUNTS tree page is currently being edited by User A.

While User A has the tree in edit mode, only User A can edit the tree. Although User B and User C cannot edit the tree, they can still perform many actions. The following table describes the actions users can perform on trees in the multiuser environment, using this example. The first column lists the action. The second column denotes whether the action is available to User A while she has the QE\_ACCOUNTS tree reserved. The third column denotes whether User B and User C can perform the action on the QE\_ACCOUNTS tree while User A is editing the tree:

<b>Action</b>	<b>Available to User A</b>	<b>Available to User B and User C</b>
Edit the tree definition.	Yes	No
View the tree definition.	Yes	Yes
Edit the application data.	Yes	Yes
Edit the tree.	Yes	No
Display the tree.	Yes	Yes
Navigate around the tree.	Yes	Yes
Change navigation options.	Yes	Yes

<b>Action</b>	<b>Available to User A</b>	<b>Available to User B and User C</b>
Change display options.	Yes	Yes
Save the tree.	Yes	No
Save the tree with different keys(tree name, effective date, and so on).	Yes	Yes

After User A *releases* the tree, it reverts to display mode for all users. It also reverts to display mode if User A does not perform any action on the tree for the length of time as defined in the time-out setting.

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**Note:** When the multiuser environment is enabled, the display of the checkout mode and editing user will not be visible to users with view-only access. It will also not be visible to users working in the Tree Viewer module or to users accessing Tree Viewer pages through other applications.

---

### Performing an Update or Cancel Due to a System Prompt

During the time a user has a tree in edit mode, other users who have the same tree in display mode will be required to either reload the tree or cancel out of the tree if the editing user performs any of the following:

- Branches a tree without existing branches.
- Deletes the last remaining branch of a tree.
- Deletes the branch that has been opened by one of the other users (for example, User B or user C).
- Saves the tree and releases it after performing the save.

If the user selects to reload a tree, PeopleSoft Tree Manager tries to open the tree at the node or leaf on which the user worked. If this is not possible, PeopleSoft application opens the tree at the first page of the tree.

### Adding New Levels or Modifying Tree Definitions

When the multiuser environment is enabled, users can only add new levels or perform modifications to a tree definition when the root branch is checked out and the tree has no other checked out branches.

---

**Note:** When the multiuser environment is enabled, a user cannot check out a tree branch if another user working with a different branch of the same tree has modified the tree definition and either *has* or *has not* saved the changes.

If users edit specific branches without modifying the tree definition, other users can still edit different branches of the same tree at the same time.

---

### Enabling the Multiuser Environment

Before enabling the multiuser environment, you must assign a unique user ID to each user. If you are not using the multiuser environment, you can use a shared user ID; however, this is not required.

To enable the multiuser environment:

1. Select **PeopleTools > Utilities > Administration > PeopleTools Options**.
2. In the Tree Manager Options group box, select the **Use Tree Update Reservation** option.
3. In the **Max Tree Inactivity Period, min** field, enter the number of minutes allowable for a user to remain inactive during edit mode.

In PeopleSoft Tree Manager, *inactivity* is defined as not performing *any* operation. Minimal actions including navigation and clicking on tree entries or action images are considered to be *active*. If the user is inactive for the set number of minutes, the tree or branch reverts to display mode.

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**Note:** PeopleSoft recommends that you set the inactivity period at less than or equal to the browser time-out settings – 20 minutes for Internet Explorer.

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4. Reboot the application server.

---

**Note:** You must reboot the application server after enabling or disabling the multiuser environment and after changing the inactivity period in order for these changes to take effect. If a tree is opened in display mode, users can still modify user data such as node or leaf descriptions. If a tree is branched, users can check out different branches independently.

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See "Building Query Access Group Trees" (Security Administration), "Using Query Access Group Trees" (Query).





## Chapter 3

# Using PeopleSoft Tree Manager

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## Opening Trees

This topic discusses how to search and organize trees.

## Searching for Trees

After you have your browser open in PeopleSoft Pure Internet Architecture, navigate to PeopleSoft Tree Manager (PSTREEMGR) so that you can view or modify trees.

To open a tree:

1. Select **Tree Manager > Tree Manager**.

The Tree Manager search page appears.

2. In the **Search By** drop-down list, select a value to search by.

Alternatively, click the **Advanced Search** link to search for a combination of values, such as **Node Record Name**, **Detail Record Name**, **Structure Name**, **Tree Category**, and so on.

3. Click the **Search** button.

The system displays a list of the trees that match the data that you have entered.

4. Click the tree name link for the tree that you want to open.

## Related Links

"Using Search Pages to Retrieve Data" (Applications User's Guide)

## Organizing Trees

Use the Tree Manager search page to organize trees and narrow search criteria by assigning trees to categories that you define.

Navigation:

**Tree Manager >Tree Manager**

This example illustrates the fields and controls on the Tree Manager search page.

### Tree Manager

Enter any information you have and click Search. Leave fields blank for a list of all values.

**▼ Search Criteria**

Tree Name:    
 SetID:     
 Set Control Value:    
 Effective Date:     
 Tree Branch:    
 Description:    
 Category:     
 Tree Structure ID:     
 Valid Tree:     
 Node Field:     
 Detail Field:

Case Sensitive

[Basic Search](#)

[Save Search Criteria](#)

### Search Results

View All First  1-20 of 20  Last

Tree Name	SetID	Set Control Value	Effective Date	Tree Branch	Description	Category	Valid Tree
<a href="#">QE_ACCOUNTS</a>	QEDM2	(blank)	01/01/1900	(blank)	<a href="#">COA Hierarchy</a>	QEDMO	<a href="#">Valid Tree</a>
<a href="#">QE_ACE_848_EMPL</a>	QEDM1	(blank)	01/01/1900	(blank)	<a href="#">ACE 848 Employee Tree</a>	QEDMO	<a href="#">Valid Tree</a>
<a href="#">QE_ACE_AFTREE</a>	QEDM1	(blank)	01/01/1900	(blank)	<a href="#">QE ACE All Function Tree</a>	QEDMO	<a href="#">Valid Tree</a>
<a href="#">QE_ACE_DGC_BU</a>	QEDM1	(blank)	01/01/1900	(blank)	<a href="#">BU Tree for DGC Model</a>	DEFAULT	<a href="#">Valid Tree</a>
<a href="#">QE_ACE_DGC_DEPT</a>	QEDM1	(blank)	01/01/1900	(blank)	<a href="#">Dept Tree for DGC Model</a>	DEFAULT	<a href="#">Valid Tree</a>
<a href="#">QE_ACE_DGC_DTRG1</a>	QEDM1	(blank)	01/01/1900	(blank)	<a href="#">Date Range</a>	QEDMO	<a href="#">Valid Tree</a>

Categories are defined on the Tree Definition and Properties page. Categories must conform to the same character limitations as the tree name. Category names cannot exceed 18 characters and should not contain special characters such as /, \, \*, :, ", <, >, and |.

**Note:** There are no edit checks to verify a category's existence – if the category does not exist, PeopleSoft Tree Manager adds a new one.

## Navigating PeopleSoft Tree Manager

This topic gives an overview of navigating PeopleSoft tree manager.

### Using the Navigation Bar

Use the Tree Manager page (PSTREEMGR) to view or modify trees. This page displays the tree with the root node expanded one level.

Navigation:

**Tree Manager > Tree Manager**

This example illustrates the fields and controls on the Tree Manager page. Definitions for the fields and controls appear following the example.



**Note:** PeopleSoft Tree Manager displays one page of the tree at a time. You can navigate through large trees using **First Page**, **Next Page**, **Last Page**, and so on.

You can perform the following actions on the selected tree by using the links and images on the navigation bar – the horizontal blue bar at the top of the tree.

<b>Field or Control</b>	<b>Description</b>
<b>Collapse All</b>	Click to close all of the visible nodes except for the root node. The root node is always expanded.
<b>Expand All</b>	Click to expand all of the nodes on the tree, so that the entire tree or branch hierarchy is visible.  Expands all parent/child relationships, but the tree hierarchy is still presented one page at a time. Use the <b>Next Page</b> and <b>Previous Page</b> arrows to move forward and backward through the tree.
<b>Find</b>	Click to access the Find Value page and search for nodes and detail values.

<b>Field or Control</b>	<b>Description</b>
<b>Notify</b>	<p>Click to send an email containing a link to the tree to an individual or group with whom you are currently working. You can attach a message to this email to describe a specific transaction.</p> <p>See "Sending and Receiving Ad Hoc Notifications" (Applications User's Guide).</p> <hr/> <p><b>Note:</b> PeopleSoft Tree Manager is delivered with the <b>Notify</b> button <i>enabled</i>. You can disable this button in PeopleSoft Application Designer.</p> <hr/> <p>See "Enabling the Notify Toolbar Button" (Workflow Technology).</p>

### Related Links

"Understanding Grids and Scroll Areas" (Applications User's Guide)

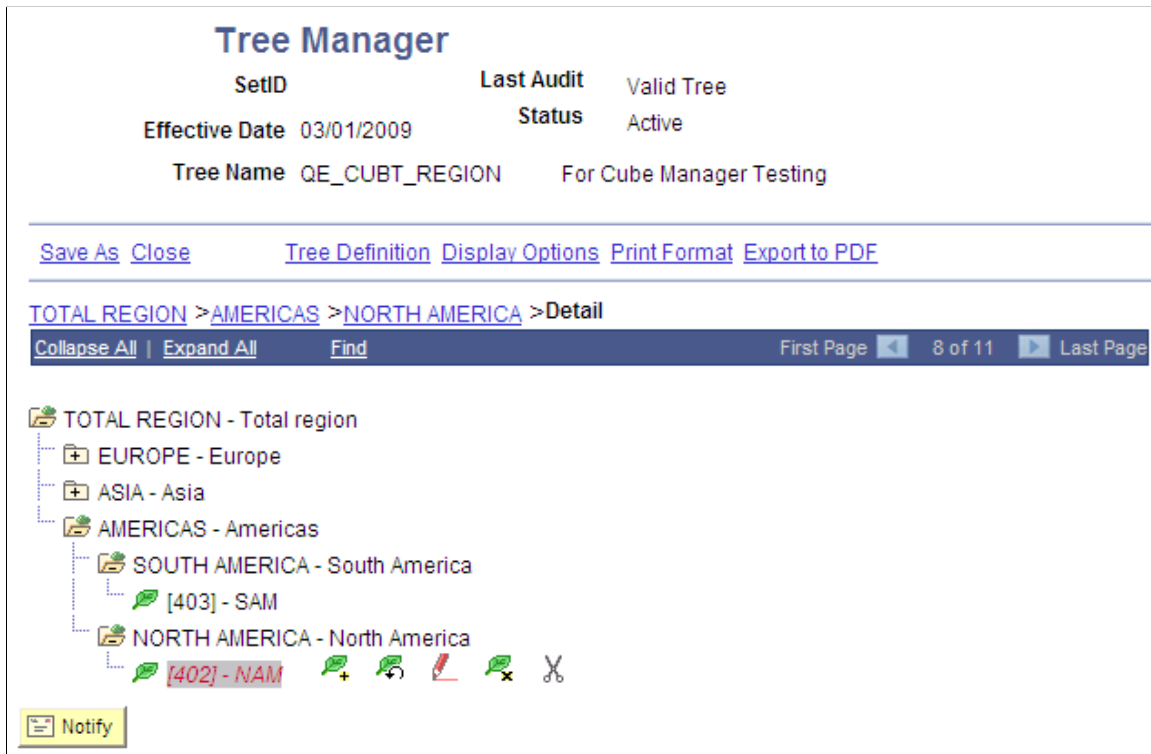
## Using Navigation Paths

As you navigate through your tree, navigation paths appear above the navigation bar. They show you the parent/child relationships between the currently-selected object and its parents. Navigation paths can provide you with a basic map of your route through the tree.

When you hover your cursor over a navigation path, a tooltip appears that identifies whether the navigation path is a link to a branch or a node.

Navigation path represent nodes in the current branch (A type nodes) and the parent branch of the opened branch (B type nodes).

In this illustration, node TOTAL REGION is the parent branch of AMERICAS; AMERICAS is the parent node of NORTH AMERICA and SOUTH AMERICA; and NORTH AMERICA is the parent node of 402-NAM.



The maximum number of entries in a navigation path displayed is seven. When you start exceeding that number, the system automatically removes the earlier ancestor nodes. This ensures that navigation paths always begin with the parent node of the currently selected node.

## Expanding and Collapsing Nodes

You can collapse any node at any level to give you a better overview of the entire tree. Closed yellow folders indicate that you can expand the node to show additional nodes and detail values. Closed gray folders indicate a node that has no children – either child nodes or detail values. Open yellow folders indicate a node that has been expanded and is showing child nodes or detail values.

To expand a node one level, click its folder image. Click the folder image again to collapse the node.

To expand all child objects for a node, first select the node, and then click the image with two folders, located to the right of the node description.

---

**Note:** Expanding all child objects (node hierarchy) can be a time-consuming process. The more levels in the node hierarchy, the longer the process will run. A warning message appears if your process might take a long period of time to run.

---

## Searching for Nodes or Detail Values

Use the Find Value page (PSTREEMGRFIND) to find a specific node or value.

Navigation:

1. Select **Tree Manager >Tree Manager**.
2. Search for an existing tree or create a new one.
3. Select a tree on the Tree Manager page and click the **Find** link.

This example illustrates the fields and controls on the Find Value page. Definitions for the fields and controls appear following the example.

**Find Value**

**Find Tree Node**

Tree Node:

Description:

**OR**

**Find Detail Value**

Product ID:

Description:

**Case Sensitive Search**

**Exact Matching**

Find
Close

**Note:** The actual labels on these fields change depending on the default labels defined for the column used for the node or detail values. For example, in the Department Security tree, the label for the node values reads Department ID.

<i><b>Field or Control</b></i>	<i><b>Description</b></i>
<b>Tree Node</b>	Enter the tree node name and click the <b>Find</b> button. A newly created node will not be listed in the <b>Node List</b> until a Save is performed. However, if you enter the exact name of the newly created node and click the <b>Find</b> button, the node will be found. Search results of the newly created nodes do not depend on selecting or clearing the <b>Exact Matching</b> option.
<b>Description</b>	Enter the tree node description and click the <b>Find</b> button. When searching by description, the system does not locate newly created nodes until a Save is performed.

<b>Field or Control</b>	<b>Description</b>
<b>Detail Value (EmplID) and Description (Last Name)</b>	<p><b>Note:</b> In this example, the <b>Detail Value</b> field appears as <i>EmplID</i> and the <b>Description</b> field appears as <i>Last Name</i>.</p> <hr/> <p>Enter a detail value or description and click the <b>Find</b> button.</p> <p>When searching by value, if a detail value is defined as a range of values, then the system looks for the detail values that the entered value falls under.</p> <p>If the detail value is defined as a specific value, then the system looks for detail values that begin with or match the value entered.</p> <p>If a user types in the exact name of the newly created detail value and clicks the <b>Find</b> button, the detail value is found. Search results of the newly added details do not depend on selecting or clearing the <b>Exact Matching</b> option. If the tree features the <i>Duplicate Leaves</i> option, only the first occurrence of the newly added detail value will be found.</p> <hr/> <p><b>Note:</b> When searching for detail values that involve a range of values or duplicate values, the system may not find a detail value that has been recently added or changed until a Save has been performed. The results of this operation depends on database sorting options and database type.</p> <hr/>
<b>Case Sensitive Search</b>	<p>Select to use the case-sensitive search option for descriptions.</p> <p>This option is not used for node or detail names, because they are key fields, which PeopleSoft Tree Manager automatically changes to upper case.</p>
<b>Exact Matching</b>	<p>Select to search for an exact match. Clear this option to perform partial searches.</p> <p>If you clear this option, the system automatically adds a wildcard character at the end of the user defined search condition. If you want to use a wildcard search by applying a wildcard character at the beginning of the word, you need to use the database-specific wildcard character.</p> <p>You receive a warning message if you cleared this option and your search criteria was too broad – more than 200 rows returned.</p>

If PeopleSoft Tree Manager finds a node or detail value that matches your search string, it displays the node or detail value and builds navigation paths to show the navigation path to the entry found.

**Note:** If the value for which you are searching is contained inside a detail range, PeopleSoft Tree Manager displays the appropriate range. Click the **Edit Data** image to display the list of values contained in that range. Keep in mind that detail values are stored as strings, so if your values are identified by numbers, the range may include more values than expected.

PeopleSoft Tree Manager finds the first occurrence of the node or detail value that matches your search string and highlights it. If duplicate values exist, click **Next** to search for the next occurrence of the value.

When the next occurrence has been found, the **Previous** link become available.

If you enter values or descriptions in more than one field on the Find Value page, the system uses the higher located field as a search condition and ignores the lower fields.

### Related Links

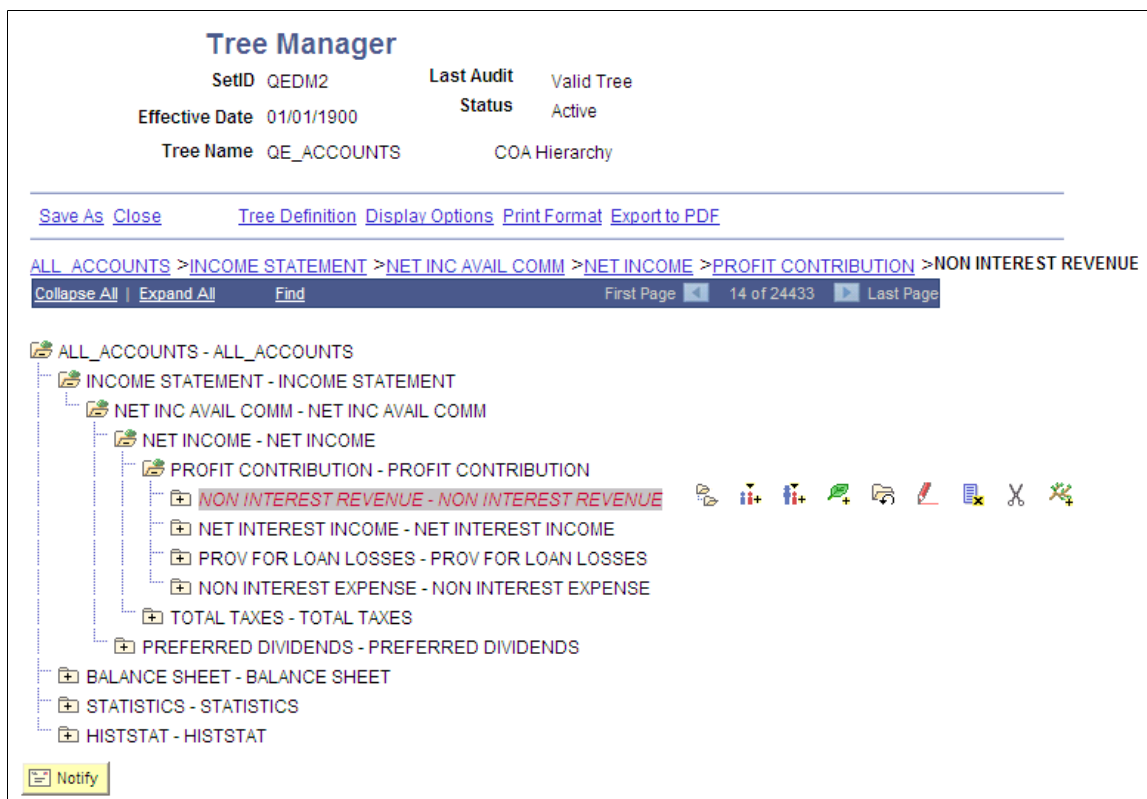
[Working with Detail Values](#)

"Using Wildcard Characters to Find Information" (Applications User's Guide)

## Using the Line Counter

PeopleSoft Tree Manager's line counter provides an automatic count of the numbers of lines of a tree that are currently displayed. In this example, the line counter displays *14 of 24433*, telling us that 14 rows are currently displayed out of a possible 24433 rows available in the tree. The line counter does *not* provide information on the *position* in the tree of the displayed lines.

Example of line counter that provides number of rows currently displayed.



## Working with Tree Nodes

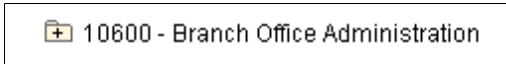
This topic discusses how to work with tree nodes.



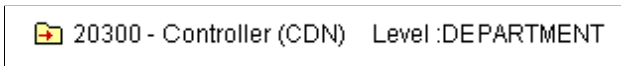
## Describing Tree Nodes

A node in PeopleSoft Tree Manager has three parts: the node image, the node name, and a node description.

In this example, the node is collapsed, so the folder image is closed. The node name is 10600, and the node description is Branch Office Administration.



In this example, the node skips a level.
















To display images for working with nodes, click the description or node name.

This example illustrates Node with editing images. Definitions for the images appear following the example.



This is a complete list of node editing images. When you highlight a node, only the images representing the available actions appear:

<b>Field or Control</b>	<b>Description</b>
	Click the <b>Expand Node Hierarchy</b> icon to expand all child objects for the selected node.
	Click the <b>Insert Child Node</b> icon to insert a new node that will be a child of the currently selected node.
	Click the <b>Insert Sibling Node</b> icon to insert a new node that will share the same parent as the currently highlighted node.
	Click the <b>Insert Detail</b> icon to insert a new detail value.  This icon is available only if the detail value information has been entered on the Tree Structure Detail page.
	Click the <b>Update Node Properties</b> icon to display the Node Properties page, which enables you to change the level of a node or rename a node.
	Click the <b>Edit Data</b> to display a page for maintaining or editing the application data for the node. The table that stores the data is defined on the Tree Structure Maintenance page.

<b>Field or Control</b>	<b>Description</b>
	<p>Click the <b>Delete Node</b> icon to delete the selected node.</p> <hr/> <p><b>Note:</b> If you delete an object that has child nodes, all of its child nodes will also be deleted.</p> <hr/>
	<p>Click the <b>Cut</b> icon to cut one or multiple tree nodes or tree leaves, and then use the <b>Paste as Sibling</b> or <b>Paste as Child</b> icons to paste all cut tree nodes or tree leaves at once as children or siblings.</p> <p>When you perform cut and paste in Tree Manager, note that:</p> <ul style="list-style-type: none"> <li>• A node can be pasted as a sibling or child of a node, but a node cannot be pasted as sibling of a leaf.</li> <li>• A leaf can be pasted as a child of a node or sibling of a leaf, but a leaf cannot be pasted as sibling of a node.</li> <li>• A node cannot be pasted as a child or sibling of its own children. When a node is cut, the Paste icon is available with any of its children.</li> <li>• The Cut icon in a node or a leaf is not available if its parent is cut.</li> <li>• Moving a node moves all its children (child nodes and leaves) along with it.</li> <li>• Root node and branched node cannot be cut.</li> </ul> <hr/> <p><b>Note:</b> This icon is not available for dynamic detail leaves.</p> <hr/>
	<p>Click the <b>Paste as Sibling</b> icon to paste a cut node into the tree as a sibling.</p>
	<p>Click the <b>Paste as Child</b> icon to paste a cut node into the tree as a child.</p>
	<p>Click the <b>Branch</b> icon to subdivide that part of the tree into a separate component that can be maintained and viewed separately from the main tree.</p>
	<p>Click the <b>Open Branch</b> icon to open the selected branch in PeopleSoft Tree Manager.</p>
	<p>Click the <b>UnBranch</b> icon to remove the selected branch and PeopleSoft Tree Manager replaces the branch image with the node image. Any nodes that report to the selected node are now available in the tree.</p>

## Inserting Nodes

---

**Note:** You cannot define a sibling or child node with an effective date greater than the effective date of the tree.

---

To insert a node:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. On the Tree Manager page, highlight a node.
4. Click either the **Insert Child Node** or **Insert Sibling Node** icon.
5. In the **Tree Node** field, click the prompt button to find the node name to insert.
6. Enter the node name or select the node from the list.

The Insert Child Node or Insert Sibling Note page appears with the selected value.

7. Click the **Add** button.

If you entered values that have already been defined in the User Node data record (table) but was not a part of the tree, PeopleSoft Tree Manager adds the values to the tree when you click the **Add** button.

If you enter new values, PeopleSoft Tree Manager opens a User Node data page, where you can add a new value. If a new value is successfully added to the database, Tree Manager adds that value to the tree.

If the node you specified already exists in the tree, the system displays an error pointing to the duplicate node.

## Moving Nodes

To move a node using cut and paste:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. In the Tree Manager page, highlight the node and click the **Cut** icon.
4. Select the destination node and click the **Paste as Sibling** or **Paste as Child** icon.

The node is pasted into the position that you specified. Remember that you cannot insert a child node into a branch node, insert a sibling node into a root node, or insert a parent node into its child.

PeopleSoft Tree Manager moves the entire part of the tree starting at the selected node. If the moved node has nodes or detail values reporting to it, they also move to the new position.

---

**Note:** You cannot move branched nodes.

---

## Levels Behavior When Nodes are Moved

The following are general rules used for levels when nodes are moved:

- Tree with strictly enforced levels: The parent node must always be at a higher level than its children.
- Tree with loosely enforced levels: No rules are enforced; therefore, levels of the descendant nodes should be manually adjusted by using the switch level function on the pasted node.

The following table shows the basic behavior of levels when cutting and pasting nodes.

<b>Action</b>	<b>Strictly Enforced Levels</b>	<b>Loosely Enforced Levels</b>
Moving node to a higher level.	Levels of the pasted node and its children are not automatically adjusted.  The pasted node appears as a skipped node.  (Node image changes to a skipped node image).	Levels of the pasted node and its children are not automatically adjusted.  The pasted node appears as a regular node.
Moving node to a lower level.	To ensure that the parent node is always at a higher level than its children, PeopleSoft Tree Manager automatically adjusts the level of the node and its children.	The levels of the pasted node and its children are not adjusted.

---

**Note:** New tree levels are not automatically created in non-root branches when a tree node is moved or a new tree node is added.

---

### Related Links

[Using Drag and Drop](#)

## Switching Node Levels

Use the Node Properties page (PSTREENODELEVELS) to change node levels, change node properties, and rename nodes.

Navigation:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. Select a node on the Tree Manager page and click the **Update Node Properties** icon.

This example illustrates the fields and controls on the Node Properties page.

In the Node Properties page, click the **Switch Level** link associated with the level to which you want to change the node. Then the node level information is updated and changed. The node level is indicated by the green arrow.

### Levels Behavior When Switching Node Levels

The following are general rules used when switching node levels:

- Tree with strictly enforced levels: The parent node must always be at a higher level than its children.
- Tree with loosely enforced levels: The parent node must be at the same or higher level than its children.

The following table shows the basic behavior of levels when the switch node level function is used.

<b>Action</b>	<b>Tree with Strictly Enforced Levels</b>	<b>Tree with Loosely Enforced Levels</b>
Switching node to a higher level.	<p>Only available for skipped nodes.</p> <p>Can only ascend the number of levels that have been skipped.</p> <p>PeopleSoft Tree Manager automatically adjusts the levels of the child nodes. For example, if the parent node is switched two levels, the children are automatically adjusted two levels.</p>	<p>Only available for skipped nodes.</p> <p>Can only ascend the number of levels that have been skipped.</p> <p>Levels of the child nodes are not automatically adjusted.</p>

<b>Action</b>	<b>Tree with Strictly Enforced Levels</b>	<b>Tree with Loosely Enforced Levels</b>
Switching node to a lower level.	<p>To ensure that the parent node is always at a higher level than its children, PeopleSoft Tree Manager automatically adjusts the level of the node and its children.</p> <p>PeopleSoft Tree Manager will automatically create additional levels, if necessary.</p>	<p>The levels of the pasted node and its children are not adjusted.</p> <hr/> <p><b>Note:</b> If the switch results in a child node level becoming higher than its parent, PeopleSoft Tree Manager automatically adjust the level to be equal to the level of parent.</p> <hr/> <p>PeopleSoft recommends that when switching levels, you should switch to just one level at a time.</p>

## Editing Node Descriptions

Use the Tree Node Maintenance page (PSTREENODEUPDATE) to edit node descriptions and other data.

To change the description of a node:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. Access the Tree Node Maintenance page by selecting a node in the Tree Manager page, and clicking the **Edit Data** icon.

The page that appears here is defined by application.

4. Update the value in the **Description** field.
5. Enter the new date as well as a new description.
6. Click the **OK** button to accept changes and return to the Tree Manager page.

---

**Note:** Tree node descriptions will not be visible if the effective date of the tree is earlier than the effective date of the node.

---

## Deleting Nodes

To delete a node:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. Highlight the node in the Tree Manager page, and click the **Delete** icon.

---

**Note:** If you delete an object that has child nodes, all of its child nodes will also be deleted.

---

4. In the message that appears, click the **Yes** button to delete or the **No** button to return to the tree without deleting.

## Renaming Nodes

To rename a node:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. Access the Node Properties page by selecting a node in the Tree Manager page, and clicking the **Update Node Properties** icon.
4. Enter new name for the node in the **New Name** text box and click the **Rename** button.

---

**Note:** The edit data image is not available for the root node.  
You cannot rename the root node or branched nodes.

---

## Working with Detail Values

This topic discusses how to work with detail values.

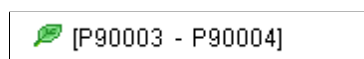
### Understanding Detail Values

A single detail value in PeopleSoft Tree Manager has three parts: the detail image, the detail name, and a detail description. Detail values can also appear as a range of values or as dynamic detail.

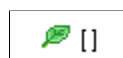
This is an example of a detail value with a description.









This is an example of a range of detail values.



This is an example of dynamic detail values or an *empty* detail.



The following is a complete list of detail value editing images. When you highlight a detail value, only the images that represent the available actions appear.

<b>Field or Control</b>	<b>Description</b>
	Click the <b>Insert Detail</b> icon to insert a new detail value. This icon is available only if the detail value information has been entered on the Tree Structure Detail page.
	Click the <b>Edit Data</b> icon to display a page for maintaining or editing the application data for the detail value. The table that stores the data is defined on the Tree Structure Maintenance page.
	Click the <b>Edit Properties</b> to enable you to change the detail value itself.  For example, you can change the range to and range from values.
	Click the <b>Delete Detail</b> icon to delete the selected detail.
	Click the <b>Cut</b> icon to cut one or multiple tree nodes or tree leaves, and then use the <b>Paste as Sibling</b> or <b>Paste as Child</b> icons to paste all cut tree nodes or tree leaves at once as children or siblings.  When you perform cut and paste in Tree Manager, note that: <ul style="list-style-type: none"> <li>• A node can be pasted as a sibling or child of a node, but a node cannot be pasted as sibling of a leaf.</li> <li>• A leaf can be pasted as a child of a node or sibling of a leaf, but a leaf cannot be pasted as sibling of a node.</li> <li>• A node cannot be pasted as a child or sibling of its own children. When a node is cut, the Paste icon is available with any of its children.</li> <li>• The Cut icon in a node or a leaf is not available if its parent is cut.</li> <li>• Moving a node moves all its children (child nodes and leaves) along with it.</li> <li>• Root node and branched node cannot be cut.</li> </ul> <hr/> <b>Note:</b> This icon is not available for dynamic detail leaves.
	Click the <b>Paste as Sibling</b> icon to paste a cut detail value into the tree as a sibling.

## Adding Detail Values

To add detail values:



1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. On the Tree Manager page, highlight the node that you want the detail values to report to, or you can highlight one of the node's other detail values.

To complete a detail value tree, you need to define detail values for each *terminal* node in the tree, which means each node that has no child nodes.

4. Click the **Insert Detail** icon.

If you are creating a dynamic detail tree, select the **Dynamic Flag** option.

The Detail Value Range page appears. It shows the tree node to which the new values report. If you select the **Dynamic Flag** option other fields on a page become locked. When you click the **Add** button, PeopleSoft Tree Manager displays brackets [ ] in place of the detail value for the selected node. When you use the tree, the system automatically selects the appropriate detail values for the node.

---

**Note:** Do not add dynamic details in a tree that already has details using ranges. Trees should be either all dynamic details or all ranges. Mixing detail types can cause unpredictable results in other applications, such as PeopleSoft Query and PeopleSoft nVision.

---

5. Use the search images to enter a range of detail values from the database field on which this tree is based.

To enter a single value, enter the same value in the **From** and **To** fields.

---

**Note:** When you specify a range of values, you cannot specify another detail value that appears within the range. For example, if you specify a range from 0271 to 0278, you cannot subsequently assign 0275 to another detail value – unless you selected the **Allow Duplicate Detail Values** option.

---

6. Click the **Add** button.

If you entered values that have already been defined in a database (User Detail Record), PeopleSoft Tree Manager adds the values to the tree when you click the **Add** button.

If you enter new values, PeopleSoft Tree Manager informs you that you have entered an undefined value. Depending on your security access, PeopleSoft Tree Manager may enable you to add the new value.

7. If you're adding a new value to the database, click the **Yes** button.

PeopleSoft Tree Manager displays the page for adding new values for the field.

## Changing Detail Value Descriptions

To change the description of a detail value:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.

3. On the Tree Manager page, highlight the detail value and click the **Edit Data** icon.

The original page with the detail value information appears.

4. Update the value in the **Description** field.
5. Click the **OK** button to apply changes to the appropriate database table.

---

**Note:** Detail value descriptions will not be visible if the effective date of the tree is earlier than the effective date of the node.

---

## Modifying a Range of Detail Values

Use the Detail Value Range page (PSTREELEAF) modify the range of values in a detail.

Navigation:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. Select a detail value on the Tree Manager page, and click the **Edit Properties** icon.

This example illustrates the fields and controls on the Detail Value Range page.

The screenshot shows the 'Detail Value Range' page. It contains the following elements:

- Tree Node:** A text field containing 'VP'.
- Dynamic Flag:** A checkbox that is currently unchecked.
- Range From:** A text input field containing '1001' with a magnifying glass icon to its right.
- \*Range To:** A text input field containing '1051' with a magnifying glass icon to its right.
- Buttons:** Two yellow buttons at the bottom: 'Update' and 'Cancel'.

To modify a range of detail values:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. Select a detail value on the Tree Manager page, and click the **Edit Properties** icon.
4. On the Detail Value Range page, modify the range values in the **Range From** and **Range To** fields.
5. Click the **Update** button to save your changes.

## Deleting Detail Values

To delete detail values:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. On the Tree Manage page, highlight the detail value and click the **Delete** icon.  
A confirmation message appears.
4. Click the **Yes** button to delete or the **No** button to return to the tree without deleting.

## Viewing Detail Values

Use the Detail Value List page to view the range of values in a detail or dynamic detail.

Navigation:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. Select a detail value on the Tree Manager page and click the **Edit Data** icon.

Alternatively, select the bracket under a dynamic detail on the Tree Manager page, and click the **Edit Data** icon.

---

**Note:** The Detail Value List page is available only for detail ranges. This page is application defined.

---

This example illustrates the fields and controls on the Detail Value List page – QEDMO Employee. Definitions for the fields and controls appear following the example.

**QEDMO Employee - 00001**

**Effective Date Criteria**

**None**     **Tree Effective Date**


**Tree Details**

[Customize](#) | [Find](#) | [View All](#) | |    First 1-9 of 9 Last

	Range From	Last Name	Social Security Number	Department
	8200	ALBRIGHT	164745113	00001
	8400	WALTERS	042589942	00001
	8500	DUNCAN	796491472	00001
	8661	CHERRIER	334514044	00001
	8760	ESPINOZA	548546523	00001
	8884	BARBATOS	267335612	00001
	8885	SCHOUX	510555654	00001
	8886	RABNEAU	510555645	00001
	8887	JOHNSON	106060337	00001

[Customize](#) | [Find](#) | [View All](#) |    First 1-9 of 9 Last

Close

<b>Field or Control</b>	<b>Description</b>
<b>Effective Date Criteria</b>	<p>Select the <i>None</i> option to display all EFFDT data rows for ranged or dynamic tree details, including future EFFDT data.</p> <p>Select the <i>Tree Effective Date</i> option to display EFFDT detail data with EFFDT less than or equal to a Tree EFFDT.</p> <hr/> <p><b>Note:</b> Future EFFDT detail date is not displayed if the <i>Tree Effective Date</i> option is selected.</p>
<b>Customize</b>	Click to change the column or sort order.
	Click the <b>Update</b> icon to select the required detail value.

This page lists the values in a range, or the values in a dynamic detail, depending on the node that you selected to access the page. In a normal detail tree, a specific value or range of values defines each node. A dynamic detail tree determines the value by matching the node name with a field on the value table.

Dynamic detail trees use the parent node name as a key to select the detail values.

Values are stored and compared as strings, not numbers. Therefore a range of values identified by numbers may include more values than anticipated. For example, a company contains the following departments: 0107, 1000, 1002, 1010, 1090, 1100, 1779, and 1869. If you specify a range of departments from 1000 to 1090, the values included would be 1000, 1002, 1010, and 1090 because the first three characters of these departments fall in the range between 100 and 109.

Although the number 10699999 is greater than 1090, when you use a string, the length of the value does not matter. For example, a range of words between CAP and CAT includes the word CARTWHEEL.

---

## Using Drag and Drop

You can move detail values and nodes using drag-and-drop functionality as a substitute for cut-and-paste.

When using drag-and-drop functionality with nodes, you can use either the **Paste as Child** or **Paste as Sibling** actions.

---

**Note:** The **Paste as Sibling** action is not available in Query Access Manager.

---

The following rules apply when using drag and drop:

- You can drop values onto the root node, but you cannot drag the root node onto another value.
- You can drag nodes and detail values to another location, but you cannot drop nodes onto detail values.
- You cannot drag and drop on:
  - Branched nodes.

- View-only trees.
  - Dynamic detail leaves.
- Drag-and-drop functionality is available only for a single page that is opened in a browser.  
To move a node or a leaf between different pages, use cut-and-paste functionality instead.
  - The drag-and-drop default action is set in the display options.
  - The drag-and-drop functionality does not work on all the supported browsers listed in the platforms database. System requirements for the drag-and-drop functionality for PC are: Internet Explorer version 7 and 8, Mozilla FireFox 3.0, and Safari 3.1.x, 3.2.x.

---

**Note:** To use drag-and-drop on large trees, change the **Number of Lines per Page** field to a greater number.

---

See [Setting Display Options](#).

---

## Saving and Configuring Trees

This topic discusses how to save and configure trees.

### Using Save and Configuration Options

From the Tree Manager page, you can perform actions on the selected tree using the links that are displayed above the navigation bar.

---

**Note:** Not all of the options appear on the screen initially. For example, the **Save Draft** link does not appear until the tree is modified, and the **Navigation Options** link appears only if the multi-navigation option has been set for the tree structure.

---

<i>Field or Control</i>	<i>Description</i>
<b>Save Draft</b>	Saves the tree or branch, but does not perform detail audits.  Trees are marked as Draft until the audits are performed by saving the tree using the <b>Save</b> command, or by manually performing the detail value audits from either the Tree Definition page or the Tree Maintenance page.
<b>Save</b>	Saves the tree or branch and performs audits on detail values.
<b>Save As</b>	Saves the current tree or branch with a new name, new effective date, or modified properties.

<b>Field or Control</b>	<b>Description</b>
<b>Close</b>	Closes the tree or branch and displays the Search page.  When you are through editing a tree, it is important to save any changes you have made and use the <b>Close</b> link to let the system know that you are finished editing the tree.
<b>Tree Definition</b>	Displays the Tree Definition and Properties page where you can access the Performance Options page, change audits and edit levels, edit category of the tree, and edit description.
<b>Display Options</b>	Changes the way trees appear on the page.  Also changes the way the drag-and-drop functionality behaves in the current session.
<b>Navigation Options</b>	Changes the navigation path for a selected node or detail to any of the components on the menu bar that are specified on the tree structure.
<b>Print Format</b>	Formats all or part of the tree so that it can be printed by using your browser's print function.  Also prints the open branch of branched trees.
<b>Export to PDF</b>	Click to access the Export to PDF page, where you can select the optional tree attributes to be exported to PDF files.

## Saving a Tree in Draft Mode

Draft mode prevents detail audits from being performed when a tree is saved. Thus, it's possible to save draft trees that are invalid. The system considers all draft trees invalid and they cannot be used in other PeopleSoft applications – such as PeopleSoft Query or PeopleSoft nVision – until they are saved or until a tree audit is performed from either a regular Save, the Tree Definition page, Tree Maintenance page, or using Tree Auditor.

To view all invalid values in a tree, you can run the audits from the Repair Tree program and use the **View Results** option to see a list of audit problems. After an audit is performed with no errors, the status of the tree changes from *draft tree* to *valid tree*.

You can see if your tree is a valid tree or draft tree by viewing the **Last Audit** value at the top of the Tree Manager page. You can also check the status of a tree from the Tree Maintenance page.

## Related Links

[Performing Audits](#)

## Copying Trees

You can copy a tree using the **Save As** link from the navigation bar, or you can use the copy function from the Tree Maintenance page. The whole tree is copied, including its branches.

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**Note:** To reduce copy time, PeopleSoft recommends copying large trees using the Copy function instead of the Save As function.

---

You can copy a tree into another setID. However, you are only copying tree data, not the supporting application data.

If the **TREE\_NAME** field exists in the User Node table, then the user node data (node descriptions, and so on) cannot be shared between trees with different names. For this reason, if you copy a tree using the Save As function in PeopleSoft Tree Manager or the Copy function in the Copy/Delete Tree utility, and user node table includes the **TREE\_NAME** field like one of the key fields, you must manually insert the new tree's node descriptions.

To copy a tree using the **Save As** link:

1. Select Tree Manager, Tree Manager.
2. Open the tree that you want to copy.
3. Select the **Save As** link from the Tree Manager page.

The Tree Definition and Properties page appears.

4. Update the information for the new tree.

You must enter at least a new tree name and effective date. You can also change any of the other settings, although there are restrictions on your changes to the Use of Levels setting.

---

**Note:** You can change the Use of Levels setting, but you cannot change a tree from not using levels to using them. Changing a tree from loosely enforced levels to strictly enforced levels is not recommended.

---

5. Click the **Save As** link or **Save As Draft** button.

### Related Links

[Maintaining Trees](#)

## Modifying Tree Definitions

Use the Tree Definition and Properties page (PSTREEDEFN) to edit tree properties for an existing tree, and to save a tree with a different name, effective date, and other properties.

Navigation:

1. Select Tree Manager, Tree Manager.
2. Search for an existing tree or create a new one.
3. Open a tree on the Tree Manager page and click the **Save As** link.


Alternatively, open a tree on the Tree Manager page and click the **Tree Definition** link.

This example illustrates the fields and controls on the Tree Definition and Properties page.


### Tree Definition and Properties

**\*Tree Name:**


**\*Structure ID:**

**\*Effective Date:**   **\*Status:**  ▼

**\*Description:**

**\*Category:**  

**\*Use of Levels:**  ▼ [Performance Options](#)

**\*SetID:**  

Audits	Item Counts
<input type="checkbox"/> <b>All Detail Values in this Tree</b> <input type="checkbox"/> <b>Allow Duplicate Detail Values</b>  <input type="button" value="Perform Audits"/>	Node Count: 21 Leaf Count: 21 Level Count: 0 Branch Count: 0

To modify tree definitions:

1. In the Tree Definition and Properties page, enter a new description or select a new category for the tree.
2. In the **Status** drop-down list, select the status of the tree to be *Active* or *Inactive*.  
An active tree can be used by other applications. An inactive tree cannot be used by the system.
3. In the **Use of Levels** field, select how levels in the tree are enforced.



The available options depend on the type of tree that you are modifying. If levels are not defined in the selected tree structure, this field is unavailable and the value *Level Not Used* is displayed. Also, the **Define Tree Levels** link is not displayed.

4. Click the **Define Tree Levels** link to access the Tree Node Definition page and add, update, or delete levels.
5. In the **Audits** group box, select how you want the tree to handle detail values.

Detail Value options are not active for trees that are:

- Keyed by business unit or user key value.

A business unit is a corporation or a subset of a corporation that is independent with regard to one or more operational or accounting functions.

- Simple winter trees, as they do not have detail values.

6. Click the **Performance Options** link to change performance options.

The available options depend on the type of tree that you are modifying.

See [Page Used to Select Performance Options](#).

7. Click the **OK** button to save your changes.

When the multiuser environment is enabled, users can only modify a tree definition to a branched tree when the branch is checked out and the tree has no other checked out branches, and add new levels or perform modifications to a tree definition when the root branch is checked out and the tree has no other checked out branches.

---

**Note:** When the multiuser environment is enabled, a user cannot check out a tree branch if another user working with a different branch of the same tree has modified the tree definition and either *has* or *has not* saved the changes.

If users edit specific branches without modifying the tree definition, other users can still edit different branches of the same tree at the same time.

---

## Defining Tree Levels

Use the Tree Levels page (PSTREEDEFNLEVELS) to add, delete, and modify tree-level information.

Navigation:

1. Select Tree Manager, Tree Manager.
2. Search for an existing tree or create a new one.
3. Open a tree on the Tree Manager page and click the **Save As** link.

Alternatively, open a tree on the Tree Manager page and click the **Tree Definition** link.

4. Click the **Define Tree Levels** link on the Tree Definition and Properties page.

This example illustrates the fields and controls on the Tree Levels page.

**Tree Levels**

Tree Name: QE\_PERS\_DATA

Tree Levels				
Level Name	All Values	Description	View Detail	Delete
CORPORATE	<input checked="" type="checkbox"/>	CORPORATE	<a href="#">View Detail</a>	<a href="#">Delete</a>
COMPANY	<input type="checkbox"/>	COMPANY	<a href="#">View Detail</a>	<a href="#">Delete</a>
DIVISION	<input type="checkbox"/>	DIVISION	<a href="#">View Detail</a>	<a href="#">Delete</a>
DEPARTMENT	<input type="checkbox"/>	DEPARTMENT	<a href="#">View Detail</a>	<a href="#">Delete</a>
BRANCH	<input type="checkbox"/>	BRANCH	<a href="#">View Detail</a>	<a href="#">Delete</a>

OK Add

To modify, add, or delete tree levels:

1. In the Tree Levels page, click the appropriate **View Detail** link to edit level details.
2. To permit nodes to skip over a level and report to a higher level, clear the **All Values** options.

For example, you might want to skip levels if you have one or more departments that are not part of any division but report directly to the COMPANY level. Select the **All Values** option to make sure that all values from lower levels report to a node at this level.

---

**Note:** The **All Values** option for the top level (root node) is selected but not available. You cannot skip over the top level.

---

3. To delete a level, click the appropriate **Delete** link.

You cannot delete a level that has nodes associated with it.

4. To add new levels, click the **Add** button.

The Tree Levels page appears.

---

**Note:** When the multiuser environment is enabled, users can only add new levels to a branched tree when the root branch is checked out and the tree has no other checked out branches.

---

See [Working with the Multiuser Environment](#).

5. Enter a name for the level.

Use a name that reflects what the nodes at this level represent. For example, the first level in the Department Security tree is CORPORATE, indicating that the root node is Corporate Headquarters.

6. Specify whether nodes can skip over the level.

Select this option if you want to make sure that all values from lower levels report to a node at this level. To allow nodes to skip a level, clear the **All Values** option.

7. Click the **OK** button.

The Tree Level page closes. If you entered the name of an existing level from another tree, the level name is added. If you entered a new name, PeopleSoft Tree Manager displays the page for entering tree level information. The displayed page is the page specified for levels in the tree structure. For most trees, it is the Tree Level page.

## Setting Display Options

Use the Configure User Options page (PSTREEMGROPTIONS) to specify what information appears on the Tree Manager page. You can also use this page to turn off and on tree node descriptions and set the default action for dragging and dropping nodes.

Use these steps to access the Configure User Options page:

1. Select Tree Manager, Tree Manager.
2. Search for an existing tree or create a new one.
3. Open a tree on the Tree Manager page and click the **Display Options** link to access the Configure User Options page.

This example illustrates the fields and controls on the Configure User Options page.

The screenshot shows the 'Configure User Options' page. It is divided into two main sections:

- Display Options:** This section contains five checkboxes:
  - Display Node Id
  - Display Node Description
  - Display Detail Values
  - Show Detail Description
  - Display Levels
 Below these is a text input field labeled 'Display Lines Per Page:' with the value '60' entered.
- Nodes Drag/Drop Default Action:** This section contains two radio buttons:
  - Paste As Sibling Node
  - Paste As Child Node

At the bottom of the page are two buttons: 'Update' and 'Cancel'.

To enable or disable tree node descriptions:

1. In the Configure User Options page, select each option to enable or disable its display option.

The **Display Levels** option is not available if levels are not used.

2. Enter the number of lines that you want each page to show.

The default number of lines is 60. The new number of lines entered remains valid until you change it again. The value remains persistent even if the user ends and restarts an internet session.

---

**Note:** Displaying a large number of lines may impede performance. Oracle recommends a number of less than 300 lines per page.

---

This example illustrates all display options on the screen: node ID, node description, detail values, and levels.

The screenshot displays the 'Tree Manager' interface. At the top, it shows the 'SetID' as QEDM2, 'Last Audit Status' as Active, 'Valid Tree' as Active, 'Effective Date' as 01/01/1900, and 'Tree Name' as QE\_ACCOUNTS with a 'COA Hierarchy'. Below this, there are navigation links: 'Save As', 'Close', 'Tree Definition', 'Display Options', 'Print Format', and 'Export to PDF'. The breadcrumb path is 'ALL ACCOUNTS > INCOME STATEMENT > NET INC AVAIL COMM > NET INCOME'. A status bar indicates '8 of 24433' items. The tree structure is as follows:

- ALL\_ACCOUNTS - ALL\_ACCOUNTS Level:LEVEL 1
  - INCOME STATEMENT - INCOME STATEMENT Level:LEVEL 2
    - NET INC AVAIL COMM - NET INC AVAIL COMM Level:LEVEL 3
      - NET INCOME - NET INCOME** Level:LEVEL 4 (highlighted in red)
      - PREFERRED DIVIDENDS - PREFERRED DIVIDENDS Level:LEVEL 4
    - BALANCE SHEET - BALANCE SHEET Level:LEVEL 2
    - STATISTICS - STATISTICS Level:LEVEL 2
    - HISTSTAT - HISTSTAT Level:LEVEL 2

At the bottom left, there is a 'Notify' button.

You can click the level name next to the node to display the Levels page and edit the level information.

---

**Note:** Tree node descriptions will not be visible if the effective date of the tree is earlier than the effective date of the node.

---

## Setting the Default Action for Dragging and Dropping Nodes

You can use the Nodes Drag/Drop Default Action group box to set the default action for dragging and dropping nodes; you can select either the **Paste as Sibling Node** icon or the **Paste as Child Node** icon.

Note the following options when setting the drag-and-drop default action:

- When right-handed users drag nodes using the *left* mouse button, they drop nodes using the set default action.

When right-handed users drag nodes using the *right* mouse button, they drop nodes using the action that is not set as the default action.

- When left-handed users drag nodes using the *right* mouse button, they drop nodes using the set default action.

When left-handed users drag nodes using the *left* mouse button, they drop nodes using the action that is not set as the default action.

- For Macintosh systems, because one mouse button exists instead of two, users dragging nodes will drop nodes using the set default action.
- The setting for the drag-and-drop default action is session-based. For this reason, after a user closes a tree, this setting reverts to the default assignment *Paste As Child Node*.

## Related Links

[Using Drag and Drop](#)

## Using Navigation Options

Use the Detail Navigation page (PSTREEMGRNAV) to select a detail page to open from the tree when editing data for the selected node or detail. For example, using the Personal Data tree, you can navigate to pages such as Personal Data, Benefits, or Salary Information.

Navigation:

1. Select Tree Manager, Tree Manager.
2. Search for an existing tree or create a new one.
3. Select a node or detail on the Tree Manager page and click the **Navigation Options**.

---

**Note:** The **Navigation Options** link appears only if multi-navigation flags have been selected in the tree structure for nodes, details, or both.

---

See [Defining Detail Tree Structures](#).

This example illustrates the fields and controls on the Detail Navigation page. Definitions for the fields and controls appear following the example.

**Detail Navigation Page**

This Page allows User to set a Page to be accessible via "Edit Data" Action Image.

Navigation Links		
Customize   Find   View All         First 1-25 of 39 Last		
Current	Component	Page
	Procurement Control	<a href="#">GL Templates</a>
	Treasury Options	<a href="#">Treasury Options</a>
	Purchasing Definition	<a href="#">Req Approval Options</a>
	Payables Definition	<a href="#">Matching</a>
	Receivables Definition	<a href="#">Bank/Payment Options</a>
	Order Management Definition	<a href="#">General Holds 2</a>
	Project Costing Options	<a href="#">Microsoft Project</a>
	Project Costing Definition	<a href="#">BU Definition</a>
	Program Management Options	<a href="#">Program Management Options</a>
	Receivables Definition	<a href="#">Accounting Options 2</a>
	Order Management Definition	<a href="#">Accounting and Billing</a>
	Order Management Definition	<a href="#">Taxes and Currency</a>
	Order Management Definition	<a href="#">Order Entry Features</a>
	Project Costing Options	<a href="#">Delete Utility Tables</a>
	Project Costing Options	<a href="#">Project Costing Options</a>
	Purchasing Definition	<a href="#">PO Approval Options</a>
	Service Procurement Definition	<a href="#">Services Procurement Bus Unit</a>
	Order Management Definition	<a href="#">General Holds 1</a>
	Promotions Mgmt. Definition	<a href="#">Promotions Definition</a>
	Project Costing Options	<a href="#">Budget Row Versioning</a>
	Project Costing Options	<a href="#">Copy Template Option 1</a>
	Payables Definition	<a href="#">Payments</a>
	Order Management Definition	<a href="#">Credit Processing</a>
	Contracts BU	<a href="#">Confidence Level Setup</a>
	Project Costing Options	<a href="#">Budget Alerts</a>


You can select a detail page to open when editing data for nodes or details. For example, using the Personal Data tree, you could navigate to pages such as Personal Data, Benefits, or Salary Information.

The page reflects the node or detail selection when you clicked the **Navigation Options** link. If no selection was made, the page reflects the first entry, node or detail, on the Tree Manager page.

---

**Note:** This page is available only if the multiple navigation options have been selected on the Tree Structure record.

---

<b>Field or Control</b>	<b>Description</b>
<b>Component</b>	This column lists components that you can navigate to when editing tree node or detail value data.
<b>Page</b>	This column displays pages that you can navigate to within the component.
	Click the <b>Current Navigation</b> icon to identify the current navigation selection.
<b>Set</b>	Click a page and then click this button to change navigation to the selected page.
<b>Reset Default</b>	Click to change the navigation back to the default page specified in the tree structure.
<b>Cancel</b>	Click to return to the Tree Manager page without saving any changes.

**Note:** The newly selected navigation path remain current for the browser session. The path returns to the default for each new session.

---

## Printing Trees

You can print either part of the tree or the whole tree. When you print an opened branched tree, just the branch prints.

**Note:** To avoid a browser or Tuxedo time-out, we recommend that you export large trees to PDF files before you print them.

To print a tree in Tree Manager:

1. Highlight the node or leaf to print.

To print a whole tree, highlight the root node, or do not highlight any part of the tree.

To print part of a tree, highlight the top node for the hierarchy that you want to print. You can also select a detail value belonging to that hierarchy.

**Note:** You cannot print a branch from the main tree. If you highlight a branch and click the **Print Format** link, a warning message appears asking you to first open the branch.

2. Click the **Print Format** link on the navigation bar to format the entire tree so that it can be printed from your browser's print function.

The expanded tree appears in your browser.

---

**Note:** The concept of *pages* does not exist on the Print Format page. For this reason, if a selected node hierarchy is too large, your browser may time out. To reduce the chances of a time-out occurring, print only the necessary portions of the tree.

---

3. Click the **Print** button of your browser or select **File > Print** from your browser to print the tree.

---

**Note:** Tree print jobs are sent to your default printer.

---

---

## Exporting Trees to PDF Files

In addition to using the Tree Print Format page to print trees in Tree Manager, you can also use the Export to PDF page (TREE2PDFOPTIONS) to export part of a tree or an entire tree to a PDF file. Then you can save the exported tree in the file system, send it to Report Manager, or send it to a printer. When exporting a tree to PDF format, you can export the tree with or without expanded branches, detail values, detail descriptions, and level information. After exporting a tree, you can print it automatically or manually.

---

**Note:** To avoid a browser or Tuxedo time-out, we recommend that you export large trees to PDF files before you print them.

---

Printing trees uses BI Publisher, Application Engine, and Process Scheduler. Process Scheduler enables an Application Engine program to collect all relevant information from the tree and pass it to BI Publisher. BI Publisher produces the required PDF output for the tree. Then, the Report Distribution process posts the PDF output to Report Manager. You can save this PDF output in the file system or send it directly to the printer, based on your selection during report scheduling.

### Page Used to Export Trees to PDF Files

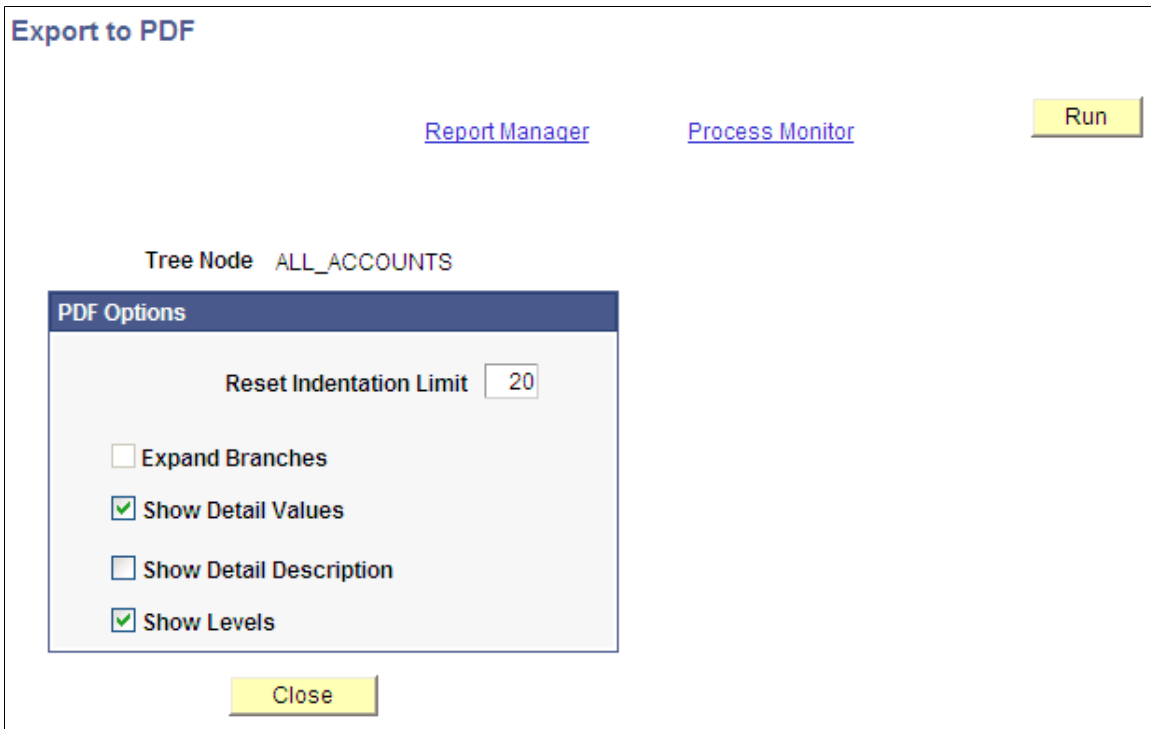
Use the Export to PDF page (TREE2PDFOPTIONS) to select the optional tree attributes to be exported to PDF files.

Navigation:

**Tree Manager >Tree Manager >Export to PDF**



This example illustrates the fields and controls on the Export to PDF page. Definitions for the fields and controls appear following the example.



<b>Field or Control</b>	<b>Description</b>
<b>Tree Node</b>	Displays the name of the node that you selected to export to a PDF file. <hr/> <b>Note:</b> This node and all its descendants will be exported to a PDF file. <hr/>
<b>Reset Indentation Limit</b>	Indicates the visual position of tree objects in the PDF file.  Tree objects will be positioned at the beginning of the page if set at a position beyond the reset indentation limit.
<b>Expand Branches</b>	Select to export the tree with branches expanded.  If you do not have access to the branch, it will not be expanded.
<b>Show Detail values</b>	Select to export the tree with detail values.
<b>Show Detail Descriptions</b>	Select to export the tree with detail value descriptions.

<b>Field or Control</b>	<b>Description</b>
<b>Show Levels</b>	Select to export the tree with level information of the tree shown.

**Note:** The Expand Branches, Show Detail Values, Show Detail Descriptions, and Show Levels options are not active for Query Access trees.

## Steps Used to Export Trees to PDF Files

To export a tree to a PDF file:

1. Select **Tree Manager >Tree Manager**.

Alternatively, access the Query Access Manager page by selecting **PeopleTools >Security >Query Security >Query Access Manager**.

2. Open a tree and click the **Export to PDF** link.

The Export to PDF page appears.

3. Set the PDF options that are used to convert the selected tree to a PDF file.

4. Click the **Run** button to schedule the PSTREE2PDF application engine.

The Process Scheduler Request page appears.

5. Select an option from the **Type** drop-down list.

- Select the **Printer** option to send the PDF output file directly to a printer.
- Select the **Web** option to send the PDF output file to Report Manager.
- Select the **File** option to save the output file to a specific location.

6. Click the **OK** button.

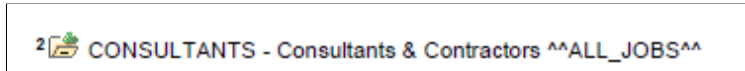
The Export to PDF page reappears.

The system exports the Tree to a PDF file that is either saved in the file system, listed in Report Manager, or printed from the selected printer.

Note the following information in the exported PDF file:

- The first report page shows a header with tree name, tree keys, setID, effective date, and so on.
- The first report page shows the tree definition, level definitions, and PDF-display option.
- Each tree object has an associated icon that represents the object type and a reference to the parent tree object (except the root node).
- Each tree object has a printed reference to its parent.

This is an example of a Node in BI Publisher generated report in PDF format.



In the previous example:

- 2 represents the level number.
- *CONSULTANTS* is the node name.
- *Consultants & Contractor* is the node description.
- *^ALL\_JOBS^* is the name of the parent node.







This is an example of a Leaf in BI Publisher generated report in PDF format.





In the previous example:

- |1510| is a leaf detail value.
- [ ] indicates a dynamic leaf.
- [- ] indicates an empty leaf.
- ^CONSULTANTS^, ^20300^, and ^00001^ are the name of the parent nodes.

The following table lists and describes the icon for each type of node or leaf.

<b>Icon</b>	<b>Description</b>
	Leaf
	Node
	Skipped Level Node
	Collapsed Branch
	Expanded Branch
	Expanded Record

<i>Icon</i>	<i>Description</i>
	Terminal Node
	Record

**Note:** All users who have permission to run BI Publisher reports are able to use the Export to PDF feature. If they do not have access to a specific branch of a tree, that branch is not expanded, even after they click the Export to PDF link.







The Export to PDF feature is not supported if Process Scheduler is running on OS390.

## Using Tree Viewer

Tree Viewer is a read-only version of PeopleSoft Tree Manager. It provides security administrators with an easy way to limit some users to read-only access for all trees.

The only actions available in Tree Viewer are Display Options, Print Format, and Close. Navigation options are the same as in Tree Manager.

The following images are available when displaying trees in Tree Viewer:

<i>Field or Control</i>	<i>Description</i>
	<b>Collapse Node:</b> Click to close a node with its contents not showing.
	<b>Expand Node:</b> Click to expand a node with its contents showing all lower levels of the hierarchy.
	<b>Terminal Node:</b> Represents a node that has no children.
	<b>Branch Node:</b> Represents a node that has been branched.
	<b>Detail Value or Leaf</b> (detail/summary trees only): Represents an individual field value attached to a node at the end of a branch.
	<b>Expand Node Hierarchy:</b> Expands all child objects.

**Note:** Tree Viewer ignores branches.

## Chapter 4

# Creating Trees

---

## Understanding Steps to Create Trees

Trees are built from the highest level of the hierarchy (root node) to the lowest level of the hierarchy. Every tree is based upon a structure. The structure defines the links between your tree and the underlying tables to which it refers. There are two main kinds of tree structures:

- Detail tree structures.

There are two types of detail trees: detail-value (summer) tree and node-oriented (winter) tree.

- Summary tree structures.

These are used for PeopleSoft nVision reporting using summary ledgers.

These are some basic steps to create trees:

1. Create the tree structure or find an existing tree structure to use.
2. Create the tree definition.

The tree definition specifies:

- Tree structure.
  - The tree name and key values.
  - How the tree handles detail values.
  - Whether the tree uses levels.
3. Specify the levels in the tree, if necessary.
  4. Insert the tree nodes that define the hierarchy of the tree.
  5. Attach detail values as leaves on your nodes.

Most types of trees – detail trees, summary trees, and dynamic detail trees – have detail values. However, you skip this step for node-oriented trees.

### **Characters Not Used in Tree Name, SetID, Set Control Value, and Tree Branch**

SmartNavigation passes the values of several tree-specific fields to the application via URL. Certain characters are inappropriate for use in an URL and should be avoided. When you set up trees, do not use any of the following characters in the tree name, setID, set control value, and tree branch fields:

- ampersand (&)

- at symbol (@)
- backslash (\)
- colon (:)
- comma (,)
- caret (^)
- dollar (\$)
- equals (=)
- forward slash/virgule (/)
- grave accent (`)
- greater than symbol (>)
- left curly brace ({)
- left square bracket ([)
- less than symbol (<)
- percent (%)
- plus (+)
- pound (#)
- question mark (?)
- quotation marks(")
- right curly Brace (})
- right square bracket (])
- semi-colon (;)
- space ( )
- tilde (~)
- vertical Bar/Pipe (|)

---

## Creating Detail Tree Structures

This topic discusses how to create detail tree structures.

**Note:** When you define a tree structure, you specify the pages and record definitions PeopleSoft Tree Manager uses to store data about the parts of a tree. When you add a new node, level, or detail value to a tree, PeopleSoft Tree Manager uses this information to determine the component (pages) to capture the relevant application data. When the specified component is displayed, all of the standard business logic that is part of that component is invoked.

## Defining Detail Tree Structures

Use the Tree Structure Properties page (PSTREESTRUCTDEFN) to specify tree type, key fields, and navigation options.

Navigation:

**Tree Manager >Tree Structure**

This example illustrates the fields and controls on the Tree Structure Properties page. Definitions for the fields and controls appear following the example.

The screenshot shows the 'Tree Structure Properties' page with the following details:

- Navigation tabs: Structure (selected), Levels, Nodes, Details
- Title: **Tree Structure Properties**
- Structure ID: QE\_PERS\_DATA
- \*Description: Personal Data
- \*Type: Detail (dropdown menu)
- Additional Key Field section:
  - SetId Indirection
  - Business Unit
  - User Defined
  - None
- Navigation Options section:
  - Node Multi-Navigation
  - Detail Multi-Navigation

<i>Field or Control</i>	<i>Description</i>
Type	The default value is <i>Detail</i> .

<b>Field or Control</b>	<b>Description</b>
<b>Additional Key Field</b>	<p>Select from the following values:</p> <ul style="list-style-type: none"> <li>• <i>SetID Indirection</i>: When you create the tree, both the tree name and the setID identify it. Including the setID as part of the tree key means that you can use setID to share the tree definition among multiple business units.</li> <li>• <i>Business Unit</i>: Use the Nodes tab to select a specific business unit to act as the key of tree. Business Unit structures can only be used with node-oriented trees (trees with no detail values).</li> <li>• <i>User Defined</i>: This option is a deprecated feature. You should try to create all of your trees either using <i>SetID</i>, <i>Business Unit</i>, or <i>None</i>.</li> </ul> <hr/> <p><b>Note:</b> Trees with User Defined Key field cannot be used with other PeopleSoft tools such as Query and PeopleSoft nVision. There are no current plans to enhance these tools to work with user-defined keyed trees so you should avoid using this option.</p> <hr/> <ul style="list-style-type: none"> <li>• <i>None</i>: Your tree does not contain an additional key. It is keyed only by tree name and effective date.</li> </ul>
<b>Navigation Options</b>	<p>Select to enable multi-navigation for nodes and details.</p> <p>Multi-navigation enables you to navigate to any pages that are relevant to the node or detail pages specified on the tree structure. PeopleSoft Tree Manager enforces the set of rules to determine which pages should be included in the list.</p> <p>Multi-navigation is not available for Summary structure types.</p> <p>See <a href="#">Using Multinavigation Paths</a>.</p>

## Defining Levels

Use the Tree Levels page (PSTREESTRCTLVL) to specify the page and record to enter and store information about tree levels.

Navigation:

1. Select **Tree Manager >Tree Structure**.
2. Search for an existing tree structure or create a new one.
3. Select the Levels tab on the Tree Structure Properties page.



This example illustrates the fields and controls on the Tree Levels page.

When you create a new level in a tree, PeopleSoft Tree Manager displays the page that you specify in the **Page Name** field on the Tree Levels page and stores the application data that you enter using the record definition in the **Record Name** field. The default values for these fields come from the standard Tree Manager page.

When using standard pages, you do not need to enter anything in the **Menu Name** or **Menu Bar Name** fields. However, if you want to store level information using something other than **TREE\_LEVEL\_TBL**, then you have to create a page and component that uses that new record definition. You must also ensure that the component has been defined on a menu somewhere in your system and specify all of this information on this page.

## Defining Node Properties

Use the Tree Nodes page (PSTREESTRCTNODE) to specify the page and record used to enter and store information about tree nodes. The Tree Nodes page of a new tree structure includes default values, which are similar as in the Tree Levels page.

Navigation:

1. Select **Tree Manager >Tree Structure**.
2. Search for an existing tree structure or create a new one.
3. Select the Nodes tab on the Tree Structure Properties page.

This example illustrates the fields and controls on the Tree Nodes page.

The screenshot shows a web interface with four tabs: Structure, Levels, Nodes, and Details. The 'Nodes' tab is selected. Below the tabs is the title 'Tree Nodes'. The form contains the following fields:

- Structure ID:** QE\_PERS\_DATA
- \*Record Name:** TREE\_NODE\_TBL (with a search icon)
- \*Field Name:** TREE\_NODE (with a search icon)
- \*Page Name:** TREE\_NODE (with a search icon)
- Component Name:** (empty text box)
- Menu Name:** (empty text box)
- Menu Bar Name:** (empty text box)
- Menu Item Name:** (empty text box)

Enter the record name, field name, and page name to use for entering and storing information about tree nodes.

For a node-only tree, where each node represents a detail value, use the page, record definition, and field that correspond to the detail value you're entering. For example, if each node represents a department (as in the Department Security table), use the DEPARTMENT\_TREE page, the DEPT\_TBL record definition, and the DEPTID field. You would also identify the component that the DEPARTMENT\_TREE page belongs to, as well as all of the menu information.

---

**Note:** If you are creating a business unit or user-defined key tree structure, the Tree Nodes page displays a field for entering the business unit or user-defined key field.

If the TREE\_NAME field exists in the User Node table, then the User node data (node descriptions, and so on) cannot be shared between trees with different names. For this reason, if you copy a tree using the Save As function in PeopleSoft Tree Manager or the Copy function in the Copy/Delete Tree utility, and user node table includes the TREE\_NAME field like one of the key fields, you must manually insert the new tree's node descriptions.

---

## Defining Tree Details

Use the Tree Details page (PSTREESTRCTDETL) to define the application data and component used to maintain the detail values for your tree.

---

**Note:** This page should only be filled in for structures that you plan to use for detail-value trees (summer trees). This page is not applicable to node-only trees.

---

Navigation:

### Tree Manager >Tree Structure >Details tab

This example illustrates the fields and controls on the Tree Details page. Definitions for the fields and controls appear following the example.

Field Label	Value
Structure ID:	QE_PERS_DATA
Record Name:	QE_EMPLOYEE
Field Name:	EMPLID
Page Name:	QE_EMPLOYEE
Component Name:	QE_EMPLOYEE
Menu Name:	QE_SAMPLE_APPS
Menu Bar Name:	USE
Menu Item Name:	QE_EMPLOYEE

Enter the name of the page, component, record definition, and key field name that will be used when adding or updating the application data for a detail value. For example, if each detail value represents a department, use a page, component, and menu path that enables you to create and update department information.

Click the **Save** button to save your new detail tree structure.

---

**Note:** When the PeopleSoft Tree Manager searches for values for dynamic detail and detail ranges, the search is based first on the override search record specified on the detail menu. By doing this, the values displayed are only those that the user would normally have access to through the Application component. If an override search record is not specified on the menu, then the system uses the component's search record. If there is no component search record, the system uses the tree structure detail record. Unlike the level and node information, there is no standard page and record for detail values. These are always built on application-specific tables.

---

## Creating Summary Tree Structures

You use summary trees to group nodes from an existing detail tree without duplicating the entire tree structure. Summary trees are used with PeopleSoft nVision reporting off of summary ledgers, where the data is rolled up using a detail tree and stored with nodes from that detail tree instead of detail values.

## Defining Summary Tree Structures

Use the Tree Structure Properties page (PSTREESTRUCTDEFN) to define tree type and select a detail tree to summarize.

To create a summary tree structure:

1. Select **Tree Manager >Tree Structure**.
2. Create a new tree structure.
3. In the Tree Structure Properties page, enter a description for the tree structure.
4. Select *Summary* as the type.
5. Enter a detail tree name using the search prompt.
6. Enter a detail setID.
7. Enter a level number using the search prompt.

The level number defines the level in the detail tree that is used as the detail values for the summary tree. (The lowest level of detail in the summary tree is made up of all of the nodes from the detail tree at a specified level.)

The search results lists only the detail levels related to the selected detail tree.

## Defining Summary Tree Levels

Use the Tree Levels page (PSTREESTRUCTLEVL) to specify the page and record to enter and store information about tree levels.

To define levels for the summary tree structure:

1. Select Tree Manager, Tree Structure.
2. Search for an existing tree structure or create a new one.
3. Access the Tree Levels page by selecting the Levels tab on the Tree Structure Properties page.
4. Enter the record name and page names using the search prompts.

When you create a new level in a tree, PeopleSoft Tree Manager displays the page you specify in the **Page Name** field in the Tree Levels page and stores the data you enter using the record definition in the **Record Name** field. The default values for these fields come from the standard Tree Manager page.

When using standard pages, you do not need to enter anything in the **Menu Name** or **Menu Bar Name** fields. However, if you want to store level information using something other than TREE\_LEVEL\_TBL, then you have to create a page and component that uses that new record definition. You must also ensure that the component has been defined on a menu somewhere in your system and specify all of this information on this page.

## Defining Summary Tree Node Properties

Use the Tree Nodes page (PSTREESTRCTNODE) to specify the page and record used to enter and store information about tree nodes.

To define nodes in the summary tree structure:

1. Select Tree Manager, Tree Structure.
2. Search for an existing tree structure or create a new one.
3. Access the Tree Nodes page by selecting the Nodes tab on the Tree Structure Properties page.
4. Enter the record name, field name, and page name to use for entering and storing information about tree nodes.

## Defining Summary Tree Details

Use the Tree Details page (PSTREESTRCTDETL) to specify the record and field information used to summarize the tree.

To define tree details for the summary tree structure in PeopleSoft Application Designer:

1. Select **Start > Programs > PeopleTools 8.x > Application Designer**.
2. Through PeopleSoft Application Designer, create a view with a record type of SQL View.

For example, if you create a summary tree based on a department detail tree that is keyed by setID, and the detail tree uses PS\_TREE\_NODE\_TBL to store the node user data, then your SQL view might contain the following fields:

- **SETID**
- **DEPTID**
- **EFFDT**
- **DESCR**

3. Use the following SQL:

```
Select A.SETID, A.TREE_NODE, A.EFFDT, B.DESCR
from PSTREENODE A,PS_TREE_NODE_TBL B
where A.SETID = '<your setid>'
      and A.TREE_NAME = '<your tree name>'
      and A.SETID = B.SETID
      and A.TREE_NODE = B.TREE_NODE
      and A.TREE_LEVEL_NUM = <your detail tree level number to be summarized>
      and B.EFFDT =
      (select MAX(EFFDT)
       from PS_TREE_NODE_TBL
       where SETID = B.SETID
         and TREE_NODE = B.TREE_NODE and EFFDT <= A.EFFDT)
```

---

**Note:** In this SQL statement, TREE\_LEVEL\_NUM must match the level number specified on the Tree Structure Property page.

---

4. Through browser, select **Tree Manager > Tree Structure**.
5. Search for an existing tree structure or create a new one.
6. Select the Details tab on the Tree Structure Properties page.

The Tree Details page appears.

7. In the **Record Name** field, enter the SQL view that you created.

Confirm that the setID, tree name, and level number in the view is the same as what you entered on the Tree Structure Properties page.

8. In the **Field Name** field, enter the field from the view that you are summarizing.

For example, DEPT\_ID.

9. Click the **Save** button to save your new summary tree structure.

---

## Defining New Trees

This topic discusses how to define new trees.

### Defining Basic Attributes

Use the Tree Definition and Properties page (PSTREEDEFN) to specify general attributes for a tree.

Navigation:

1. Select **Tree Manager > Tree Manager**.
2. Search for an existing tree or create a new one.
3. Click the **Tree Definition** link on the Tree Manager page.

This example illustrates the fields and controls on the Tree Definition and Properties page. Definitions for the fields and controls appear following the example.

### Tree Definition and Properties

\*Tree Name:

\*Structure ID:

\*Effective Date:  \*Status:  ▼

\*Description:

\*Category:   [Define Tree Levels](#)

\*Use of Levels:  ▼ [Performance Options](#)

\*SetID:

Audits	Item Counts								
<input type="checkbox"/> All Detail Values in this Tree <input type="checkbox"/> Allow Duplicate Detail Values  <input style="background-color: #ffff00; border: 1px solid black; padding: 2px 10px; margin-top: 10px;" type="button" value="Perform Audits"/>	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="padding: 2px 5px;">Node Count:</td><td style="text-align: right; padding: 2px 5px;">886</td></tr> <tr><td style="padding: 2px 5px;">Leaf Count:</td><td style="text-align: right; padding: 2px 5px;">23547</td></tr> <tr><td style="padding: 2px 5px;">Level Count:</td><td style="text-align: right; padding: 2px 5px;">15</td></tr> <tr><td style="padding: 2px 5px;">Branch Count:</td><td style="text-align: right; padding: 2px 5px;">0</td></tr> </table>	Node Count:	886	Leaf Count:	23547	Level Count:	15	Branch Count:	0
Node Count:	886								
Leaf Count:	23547								
Level Count:	15								
Branch Count:	0								

<b>Field or Control</b>	<b>Description</b>
<b>Tree Name</b>	<p>If you create a new tree, enter a tree name.</p> <hr/> <p><b>Note:</b> SmartNavigation passes the values of several tree-specific fields to the application via URL. Certain characters are inappropriate for use in an URL and should be avoided. When you set up trees, some characters in the tree name, setID, set control value, and tree branch fields should not be used.</p> <hr/> <p>See <a href="#" style="color: #000080; text-decoration: underline;">Understanding Steps to Create Trees</a>.</p>
<b>Structure ID</b>	<p>Select a tree structure ID.</p> <p>Define structures using the Tree Structure Properties page.</p>

<b>Field or Control</b>	<b>Description</b>
<b>Status</b>	<p>Select a status of <i>Active</i> or <i>Inactive</i>.</p> <p>If you mark a tree as inactive, no other users have access to your tree from other PeopleSoft applications or tools.</p>
<b>Category</b>	<p>Select or add a category.</p> <p>Categorizing is a user-defined way of organizing trees so that they are easier to find when using the tree search pages.</p> <hr/> <p><b>Note:</b> Previously, the category determined how trees were arranged at the highest level and was an important visual clue in organizing trees. Category is now used only as a search value.</p>
<b>Use of Levels</b>	<p>Select a method for enforcing levels.</p> <p>Use <i>Strictly Enforced</i> or <i>Loosely Enforced</i> levels unless you have a compelling reason not to. Some features, such as creating summary trees, require levels.</p> <hr/> <p><b>Note:</b> For an existing tree, you can change the <b>Use of Levels</b> field. For example, you can change <i>Strictly Enforced</i> levels to <i>Loosely Enforced</i> levels, but you cannot change from not using levels to using them.</p> <ul style="list-style-type: none"> <li>• <i>Strictly Enforced:</i> All the nodes at a particular level represent the same kind of information. In an organization tree, for example, all nodes at one level represent companies, all nodes at the next level represent divisions, and so on. With <i>Strictly Enforced</i> levels, each node has a level assigned to it based on its position in the tree. Nodes can skip levels, and the PeopleSoft Tree Manager will visually display any levels that are skipped.</li> <li>• <i>Loosely Enforced:</i> The nodes at the same visual level of indentation do not all represent the same kind of information, or nodes representing the same kind of information appear at multiple levels. With <i>Loosely Enforced</i> levels, you assign a level to each node individually; the level is not tied to a particular visual position, although the nodes still have hierarchical parent/child relationships.</li> </ul> <hr/> <p><b>Note:</b> Changing a tree from <i>Loosely Enforced</i> levels to <i>Strictly Enforced</i> levels is not recommended.</p> <ul style="list-style-type: none"> <li>• <i>Not Used:</i> The nodes in the tree have no real hierarchy or reporting structure, but do form a logical summarization structure. With this option, nodes do not have levels associated with them.</li> </ul>



<b>Field or Control</b>	<b>Description</b>
<b>All Detail Values in this Tree</b>	<p>Select to check if all values in the detail value table should be included in the tree.</p> <p>For example, if you want to verify that all of the department IDs in the DEPT_TBL for a given setID are contained in the DEPT_SECURITY tree for that setID, select this box, and PeopleSoft Tree Manager will check for any department IDs that are not found in the tree.</p> <p>If you select this option and click the <b>Performance Methods</b> link, you can select an option in the <b>Auditing All Detail Values</b> group box on the Performance Options page.</p> <hr/> <p><b>Note:</b> This option is not available for use with winter trees.</p> <hr/> <p>See <a href="#">Page Used to Select Performance Options</a>.</p>
<b>Allow Duplicate Detail Values</b>	<p>Select to skip the audit that checks for duplicate detail values in the tree.</p> <p>When selected, you can have the same detail value appear under different parent nodes.</p> <hr/> <p><b>Note:</b> This option is not available for use with winter trees.</p> <hr/>
<b>Perform Audits</b>	<p>Click to run the selected audit option from this page.</p> <p>PeopleSoft Tree Manager also performs audits whenever you save a tree. However, no audits are performed if you save the tree using the <b>Save Draft</b> option.</p>
<b>Item Counts</b>	<p>Displays the number of nodes, leaves, levels, and branches in the currently opened tree or branch. It does not count nested branches (branches with a parent branch that is different than a currently opened branch).</p>
<b>Define Tree Levels</b>	<p>Click to access the Tree Levels page and add, update, or delete tree levels.</p> <p>See <a href="#">Defining Tree Levels</a>.</p>
<b>Performance Options</b>	<p>Click to access the <b>Performance Options</b> page and set access method, tree selector, or selector options. You can also set the <b>Auditing All Detail Values</b> option as well as <b>Tree Change Service Operation</b> options.</p> <hr/> <p><b>Note:</b> The <b>Access Method</b>, <b>Tree Selectors</b>, and <b>Selector</b> options are used mainly for optimizing tree usage with PeopleSoft nVision and Query when using the <b>In Tree</b> criteria option.</p> <hr/> <p>See <a href="#">Setting Tree Performance Options</a>.</p>

## Adding a Root Node

Use the Enter Root Node for Tree page (PSTREEROTLEVELS) to define tree levels and the root node.

Navigation:

1. Select **Tree Manager > Tree Manager**.
2. Create a new one.
3. Click the **Tree Definition** link.
4. On the Tree Definition and Properties page, enter the appropriate values and click the **OK** button.

This example illustrates the fields and controls on the Enter Root Node for Tree page.

**Enter Root Node for Tree**

**Tree Name:** PS\_DEPARTMENT

**Step 1: Set Up Tree Levels**

Level Name	All Values	Description	View Detail	Delete Level
ALL_PROJ	<input checked="" type="checkbox"/>	ALL_PROJ	<a href="#">View Detail</a>	<a href="#">Delete Level</a>
TASK	<input type="checkbox"/>	TASK	<a href="#">View Detail</a>	<a href="#">Delete Level</a>

[Customize](#) | [Find](#) | [View All](#) | | [First](#) | 1-2 of 2 | [Last](#)

[Add Level](#)

**Step 2: Define Root Node**

**\*Root Node:**

[OK](#)      [Cancel](#)

You create a tree from the top down. You start by creating the root node, then add the children of the root node, and continue down to the detail values (if the tree has them). If the tree uses levels, then you must first define the level for the root node. You may want to set up additional levels at this time.

To add a root node for tree:

---

**Note:** If your tree does not use levels and the Add Root Node page does not include level configuration, skip to step 5.

---

1. In the Enter Root Node for Tree page, add tree levels by clicking the **Add Level** button.

The Tree Levels page appears.

2. Enter a name for the level.

Use a name that reflects what the nodes at this level represent. For example, the first level in the Department Security tree is *CORPORATE*, indicating that the root node is Corporate Headquarters. You can also enter the name of a level from another tree.

---

**Note:** You can also use the search box to search for names of existing levels.

---

3. Specify whether nodes can *skip over* the level.

The **All Values** option specifies whether PeopleSoft Tree Manager permits nodes to skip over the level you're defining to report to a higher level. Select this option to make sure that all values from lower levels report to a node at this level. Clear this option to allow nodes to skip a level. For example, you might want to do this if you have one or more departments that are not part of any division but report directly to the COMPANY level.

---

**Note:** When you are adding a top level (the root node), the **All Values** option is selected but unavailable. You cannot skip over the top level.

---

4. Click the **OK** button.

The Tree Levels page closes. If you entered the name of an existing level from another tree, the level name is added. If you entered a new name, PeopleSoft Tree Manager displays the page for entering tree level information. The displayed page is the page specified for levels in the tree structure. For most trees, it is the Tree Levels page.

5. Enter a new root node name or select an existing root node.

If you are entering new node information, you must enter the information in the Tree Nodes page.

6. Click the **OK** button.

The tree appears with the root node on the page.

---

**Note:** When the multiuser environment is enabled, a newly created tree appears by default in edit mode.

---

## Inserting Nodes into Trees

For more information on inserting nodes into trees, see [Inserting Nodes](#), [Working with Tree Nodes](#).

## Adding Detail Values

For more information on adding detail values, see [Adding Detail Values](#), [Working with Detail Values](#).

---

## Working with Tree Branches

This topic discusses how to work with tree branches.

## Understanding Tree Branches

Branching means taking a limb of the tree – a section of the tree that reports into a single node – and creating an actual tree object to hold that limb. Branching a tree can improve PeopleSoft Tree Manager performance (by reducing the amount of data it needs to load when you open a large tree). After you branch a tree, you can specify different object security settings for the branches. When a tree is branched, multiple users can maintain separate sections of the tree while working simultaneously.

When you branch a tree, you're splitting the original tree into two parts. PeopleSoft Tree Manager creates one new object for your branch and another object to hold the remaining part of the tree. After branching, you have two objects:

- The new branch, or subtree, that you created.
- A *branch* that corresponds to the rest of the original tree (minus the new branch).

You can use PeopleSoft Object Security to give users different security access to these objects. For example, by restricting access to the new branch, you can give users access only to that branch.

Assigning different security access to different parts of the tree prevents users from making unauthorized changes to the parts of the original tree (tree branches) which they do not have access granted.

---

**Note:** Users can make copies of the entire tree by using the **Save As** option.

---

After you have created a branch, you can use it as you use any other tree. You can open it independently of the larger tree, modify it, or even create branches from it. When you're using the original tree, you cannot edit the branch's nodes or details until you open that branch.

### Restrictions

The following restrictions have been applied to tree branches due to the risk of conflicts when multiple users are performing modifications to a branch tree at the same time:

- Moving nodes with subbranches.
- Switching levels on nodes with subbranches.
- Unbranching nodes with subbranches.

---

**Note:** A message will appear if a user attempts to perform any of these actions.

When the multiuser environment is enabled, a user cannot check out a tree branch if another user working with a different branch of the same tree has modified the tree definition and either *has* or *has not* saved the changes.

If users edit specific branches without modifying the tree definition, other users can still edit different branches of the same tree at the same time.

---

## Creating Tree Branches

To create a tree branch:

1. Select Tree Manager, Tree Manager.
2. Search for an existing tree in the Tree Manager page or create a new one.

3. Highlight the node that will be the root node of the branch.
4. Click the **Create Branch** icon.

PeopleSoft Tree Manager replaces the node icon with a branch node icon. None of the nodes or detail values reporting to the branched node appears in the tree display.

This is an example of a branch node.

The screenshot shows the 'Tree Manager' interface for SetID QEDM1. The tree structure is as follows:

- 00001 - Corporate Headquarters Level:CORPORATE
  - [8200] - ALBRIGHT
  - [8300] - VINCENT
  - [8400] - WALTERS
  - [8500] - DUNCAN
  - [8600] - ELIAS
- 10100 - Office of the President Level:COMPANY
- 20100 - Office of the President (CDN) Level:COMPANY
  - [8052] - AVERY
  - [8506]
  - [8613] - MARTIN
- 20200 - Human Resources (CDN) Level:DIVISION
- 20300 - Controller (CDN) Level:DIVISION
- 20400 - Retail Banking Admin (CDN) Level:DIVISION
- 20900 - Operations Administration(CDN) (highlighted with a branch icon)

Navigation and search options include: Save As, Close, Tree Definition, Display Options, Print Format, Export to PDF, Collapse All, Expand All, Find, First Page, 15 of 114, Last Page, and a Notify button.

## Opening Tree Branches

To open a tree branch:

1. Select Tree Manager, Tree Manager.
2. Search for an existing tree in the Tree Manager page or create a new one.
3. Highlight the tree branch, and click the **Open Branch** icon.

Alternatively, in the Tree Manager search page, click a tree name link for the branch that is being defined by a value in the Tree Branch section.

## Removing Tree Branches

To remove a tree branch:

1. Select Tree Manager, Tree Manager.
2. Search for an existing tree in the Tree Manager page or create a new one.
3. Highlight the tree branch node and click the **Unbranch** icon.

PeopleSoft Tree Manager replaces the branch icon with the node icon. Any nodes that report to the selected node are now available in the tree.

When you remove a tree branch, do not forget to update PeopleSoft Object Security.

### Related Links

"Understanding Definition Security" (Security Administration)

"Understanding Definition Security (Browser Client)" (Security Administration)

---

## Granting Security Access to Trees or Branches

You can use PeopleSoft Object Security to impose restrictions on your trees, tree branches, and tree structures with one of the following security levels:

- Full access.
- Read-only access.
- No access.

You can also use PeopleSoft Definition Security to restrict access to branches. You can give users access to an entire tree *except* for a branch or give them access to the particular branch without granting access to the tree itself. This task should be performed using Application Designer – Definition Security dialog box.

The following examples show the QE\_PERS\_DATA tree that has three branches and the definition security for user permission lists are set differently.

In this example, branch *00001-Corporate Headquarters* is defined with a full access.

The screenshot shows the 'Tree Manager' interface for SetID QEDM1. The tree is titled 'Personal Data Tree' and is active. The effective date is 05/05/1997. The tree name is QE\_PERS\_DATA. The interface includes navigation links: Save As, Close, Tree Definition, Display Options, Print Format, and Export to PDF. A toolbar shows 'Collapse All', 'Expand All', and 'Find' options, along with page navigation (First Page, 8 of 9, Last Page). The tree structure is as follows:

- 00001 - Corporate Headquarters (Full Access icon)
  - [8200] - ALBRIGHT
  - [8300] - VINCENT
  - [8400] - WALTERS
  - [8500] - DUNCAN
  - [8600] - ELIAS
  - 10100 - Office of the President (Read-Only icon)
  - 20100 - Office of the President (CDN) (Read-Only icon)

A 'Notify' button is located at the bottom left of the tree view.

In this example, branch *10100 - Office of the President* is defined with a read-only access. User has a read-only access to the 10100 - Office of the President branch, only an Open Branch icon appears for 10100 – Corporate Headquarters branched node.

The screenshot shows the 'Tree Manager' interface for SetID QEDM1. The tree is titled 'Personal Data Tree' and is active. The effective date is 05/05/1997. The tree name is QE\_PERS\_DATA. The interface includes navigation links: Save As, Close, Tree Definition, Display Options, Print Format, and Export to PDF. A toolbar shows 'Collapse All', 'Expand All', and 'Find' options, along with page navigation (First Page, 8 of 9, Last Page). The tree structure is as follows:

- 00001 - Corporate Headquarters (Open Branch icon)
  - [8200] - ALBRIGHT
  - [8300] - VINCENT
  - [8400] - WALTERS
  - [8500] - DUNCAN
  - [8600] - ELIAS
  - 10100 - Office of the President (Read-Only icon)
  - 20100 - Office of the President (CDN) (Read-Only icon)

A 'Notify' button is located at the bottom left of the tree view.

In this example, branch *10100 - Office of the President* is opened with read-only access, no modification actions available for any entries in a branch, tree menu items allow only navigation actions, and user is not able to save a branch.

### Tree Manager

SetID	QEDM1	Last Audit	Valid Tree
Effective Date	05/05/1997	Status	Active
Tree Name	QE_PERS_DATA	Personal Data Tree	

---

[Save As](#) [Close](#)      [Tree Definition](#) [Display Options](#) [Print Format](#) [Export to PDF](#)

---

00001 > **10100** > 10200

[Collapse All](#) | [Expand All](#)      [Find](#)      First Page ◀ 13 of 63 ▶ Last Page

- ✖ 10100 - Office of the President
  - 🍃 [8001] - ASD
  - 🍃 [8501] - BENNETT
  - 🍃 [8661] - CHERRIER
  - 📁 **10200 - Human Resources**
    - 🍃 [8121] - GREGORY
    - 🍃 [8641] - DOBBS
    - 🍃 [8750] - FULLER
    - 🍃 [8760] - ESPINOZA
    - 🍃 [8840] - HILL
  - 📁 10300 - Controllers
  - 📁 10400 - Retail Services
  - 📁 10900 - Operations Administration

📧 Notify

---

**Note:** When a branch is opened, a parent entry in a tree navigation path points to the parent branch to enable user navigating from a current branch to higher level branches. Branch security with *No access* or *Read Only* access restricts user modification to the specific branch of the specific tree. It does not prevent a specific user from seeing the content of a secured branch. Users can work around the limited access by copying a tree with a different name and have unlimited access to that new branch. To prevent users from seeing the content of the tree branch, a root node of the branched tree should be secured with *No Access* or *Read Only* access as well.

---



## Read-Only Access

This example illustrates PeopleSoft Tree Manager with read-only access.



In the All Jobs branch, which has read-only access, only the **Open Branch** icon is available.

When users open the branch, a message warns that users cannot make changes to the branch.

When the read-only branch opens, no edit icons and no **Save** link appear.

## No Access

If users try to access a tree or branch that does not allow access, they receive a warning message.

## Related Links

"Understanding Definition Security" (Security Administration)

"Understanding Definition Security (Browser Client)" (Security Administration)

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## Performing Audits

### Performing Audits

After you have completed your tree, you can have PeopleSoft Tree Manager verify that it meets the restrictions you set for it. For example, if you selected the **All Detail Values in this Tree** option when you created the tree definition, PeopleSoft Tree Manager audit verifies that you have included all detail values.

You can perform a tree audit from the Tree Definition and Properties page, by saving the tree, by running the Repair Tree batch program, or by using the Tree Maintenance page. If you want to audit a *closed* tree, use the Tree Maintenance page. To get a report of all of the problems that have been found with the tree, use the Repair Tree program.

When you perform an audit and find problems, PeopleSoft Tree Manager displays a warning message. Some examples of the problems are:

- One or more nodes have no detail values reporting to them.
- You selected the **All Detail Values** option, but one or more defined values for the database field do not appear in the tree.
- If you have not selected the **Allow Duplicate Details** option, then PeopleSoft Tree Manager checks for duplicate detail values and detail values with overlapping ranges.

---

**Note:** Although PeopleSoft Tree Manager attempts to detect overlapping detail values when the user inserts or modifies each detail value, the final audit process may detect overlapping or duplicate detail values that are not caught when the detail value is created or modified.

---

PeopleSoft Tree Manager also indicates where the problem is.

The warning message flags that the tree is invalid. You can save the tree as a draft tree only, and you cannot use it with other PeopleTools, such as PeopleSoft Query or PeopleSoft nVision, until the tree is valid.

The warning message flags that the tree is invalid. You can save the tree as a draft tree only, and you cannot use it with other PeopleTools, such as PeopleSoft Query, PeopleSoft nVision, and SmartNavigation pages until the tree is valid.

At this point, you can either correct the problem that is causing the tree to be invalid, or use the Save As Draft feature to save the tree in an invalid (unfinished) state.

All audits report the first occurrence found of any problem listed in the table. The audits are performed first on the displayed nodes and details, and then on the nodes in the database.

Node audits are only performed on open trees. If you run an audit from the Tree Maintenance page (from a closed tree), you run only the Detail audit. When you audit a tree branch, the node audits are performed on the nodes in the current branch only, while the detail audits are performed on all branches.

---

**Note:** These audits report only problems, not values. Run the Repair Tree program to get a complete list of problems with the tree.

---

The following table shows a complete list of audit checks.

<b>Check For</b>	<b>Purpose</b>	<b>When Check Occurs</b>
Overlapping Node Numbers	Reports first occurrence of two nodes whose internal node numbering is overlapping.	Always
Nodes Outside of Parent's Range	Reports first occurrence of a node whose internal node number does not fall within the parent node's internal node number range.	Always
Nodes Without Parents	Reports first occurrence of a node whose internal node number for a parent does not have an actual node with that number.	Always

<b>Check For</b>	<b>Purpose</b>	<b>When Check Occurs</b>
Duplicate Node Names	Reports the first duplicate node name when it finds a node with the same name reporting to a different parent node.	Always
Nodes Without Leaves	In a detail tree, reports when any terminal node has no leaves.	Always
All Detail Values	Reports if you have not included all detail values.	When the <b>All Detail Values In This Tree</b> option is selected on the Tree Definition and Properties page.
Duplicate Detail Values	Reports if there are any duplicate detail values.	When the <b>Allow Duplicate Detail Values</b> option is not selected on the Tree Definition and Properties page.
Skipped Levels	Reports when a level is skipped.	When the <b>All Levels</b> option is selected on the Tree Levels page.

## Tuning the Performance of the Overlapping Detail Ranges Audit

The name of the PeopleSoft SQL object used for this audit is *PS\_TDM\_SQLOVERLAP*, and it is stored in the PeopleSoft database. Edit this object in PeopleSoft Application Designer.

To tune the performance of the Overlapping Detail Ranges audit:

1. Select **Start > Programs > PeopleTools 8.x > Application Designer**.
2. Select **File > Open** in PeopleSoft Application Designer.
3. Select the *SQL* option in the **Definition** drop-down list.
4. Enter *PS\_TDM\_SQLOVERLAP* in the **Name** field of the Selection Criteria group box.
5. Click the **Open** button.

The default SQL used for detecting overlapping leaves appears in the Definition workspace.

6. Edit the SQL object as needed.

### Specifying Information for Tree Keys

In order for the *PS\_TDM\_SQLOVERLAP\_SQL* object to work properly, you must insert the following PeopleSoft-delivered tree-specific metavariables into the SQL:

- #setid# = SETID
- #efftdatein# = EFFTDATEIN
- #setcntrlvalue# = SETCNTRLVALUE

- #treename# = TREENAME

Each time the audit reaches one of these metavariables, the audit inserts the appropriate value.

---

**Note:** These metavariables work only for this SQL object. They are not systemwide metavariables.

---

## Using Metavariables in the SQL Object

The following code provides an example of using metavariables:

```
SELECT /*+ USE_HASH( B ), ORDERED */ A.RANGE_FROM, A.RANGE_TO, B.RANGE_FROM, B.RANGE_TO
FROM PSTREELEAF A, PSTREELEAF B
WHERE A.SETID = '#setid#'
      AND A.SETCNTRLVALUE = '#setcntrlvalue#'
      AND A.TREE_NAME = '#treename#'
      AND A.EFFDT = %DateIn('#effdtdatein#')
      AND A.DYNAMIC_RANGE = 'N'
      AND B.SETID = A.SETID
      AND B.SETCNTRLVALUE = A.SETCNTRLVALUE
      AND B.TREE_NAME = A.TREE_NAME
      AND B.EFFDT = A.EFFDT
      AND B.DYNAMIC_RANGE = A.DYNAMIC_RANGE
      AND (A.RANGE_FROM <> B.RANGE_FROM
           OR A.RANGE_TO <> B.RANGE_TO)
      AND B.RANGE_FROM <> B.RANGE_TO
      AND (A.RANGE_FROM BETWEEN B.RANGE_FROM AND B.RANGE_TO
           OR (A.RANGE_TO >= B.RANGE_FROM
               AND A.RANGE_TO < B.RANGE_TO))
```

The code in this example includes #setid# at each point where the setID value should be inserted. The same applies to the #treename#, #effdtdatein#, and #setcntrlvalue# metavariables.

## Using Metavariables Multiple Times Within the SQL Object

The following example shows how to use metavariables multiple times within the PS\_TDM\_SQLOVERLAP\_SQL object. Specifically, the code from the previous example has been rewritten using metavariables in both the top SELECT and bottom SELECT statements in the Union.

```
SELECT A.RANGE_FROM, A.RANGE_TO, B.RANGE_FROM, B.RANGE_TO
FROM PSTREELEAF A, PSTREELEAF B
WHERE A.SETID = '#setid#'
      AND A.SETCNTRLVALUE = '#setcntrlvalue#'
      AND A.TREE_NAME = '#treename#'
      AND A.EFFDT = '#effdtdatein#'
      AND A.DYNAMIC_RANGE = 'N'
      AND B.SETID = A.SETID
      AND B.SETCNTRLVALUE = A.SETCNTRLVALUE
      AND B.TREE_NAME = A.TREE_NAME
      AND B.EFFDT = A.EFFDT
      AND B.DYNAMIC_RANGE = A.DYNAMIC_RANGE
      AND (A.RANGE_FROM <> B.RANGE_FROM
           OR A.RANGE_TO <> B.RANGE_TO)
      AND B.RANGE_FROM <> B.RANGE_TO
      AND A.RANGE_FROM BETWEEN B.RANGE_FROM AND B.RANGE_TO
UNION
SELECT A.RANGE_FROM, A.RANGE_TO, B.RANGE_FROM, B.RANGE_TO
FROM PSTREELEAF A, PSTREELEAF B
WHERE A.SETID = '#setid#'
      AND A.SETCNTRLVALUE = '#setcntrlvalue#'
      AND A.TREE_NAME = '#treename#'
      AND A.EFFDT = '#effdtdatein#'
      AND A.DYNAMIC_RANGE = 'N'
      AND B.SETID = A.SETID
```

```

AND B.SETCNTRLVALUE = A.SETCNTRLVALUE
AND B.TREE_NAME = A.TREE_NAME
AND B.EFFDT = A.EFFDT
AND B.DYNAMIC_RANGE = A.DYNAMIC_RANGE
AND (A.RANGE_FROM <> B.RANGE_FROM
     OR A.RANGE_TO <> B.RANGE_TO)
AND B.RANGE_FROM <> B.RANGE_TO
AND (A.RANGE_TO >= B.RANGE_FROM
     AND A.RANGE_TO < B.RANGE_TO)

```

---

## Setting Tree Performance Options

### Setting Tree Performance Options

You can set performance-enhancing options to improve the database performance of queries that use trees as selection criteria. This includes queries to which tree criteria are added by PeopleSoft nVision layouts and scopes. Both PeopleSoft Query and PeopleSoft nVision use the tree performance options. The performance options do not impact PeopleSoft Tree Manager itself, only the performance of programs that use the tree data.

Because of the many variations of data distributions, indexes, queries, and optimizers, you can select SQL techniques that will tune your queries for optimum performance. By specifying these options at the tree level, your trees can be used in queries whether they are run through PeopleSoft nVision. Those options, however, can be overridden by the performance options set at the PeopleSoft nVision level.

### Page Used to Select Performance Options

Use the Performance Options page (PSTREEDEFNPRPTY) to select options to enhance tree performance as well as performance for queries that involve trees and nVision.

Use these steps to access the Performance Options page:

1. Select Tree Manager, Tree Manager.
2. Create a new tree, or search for an existing tree.
3. On the Tree Manager page, click the **Tree Definition** link.
4. Click the **Performance Options** link on the Tree Definition and Properties page.

The Performance Options page appears.

This example illustrates the fields and controls on the Performance Options page. Definitions for the fields and controls appear following the example.

### Performance Options

Tree Name:      QE\_PERS\_DATA

<div style="background-color: #2c4e64; color: white; padding: 2px;"><b>Access Method</b></div> <ul style="list-style-type: none"> <li><input type="radio"/> Use Literal Values</li> <li><input checked="" type="radio"/> Sub-SELECT Tree Selector</li> <li><input type="radio"/> Join to Tree Selector</li> <li><input type="radio"/> Use Application Defaults</li> </ul>	<div style="background-color: #2c4e64; color: white; padding: 2px;"><b>Auditing All Detail Values</b></div> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> Use All Tree Keys (Default)</li> <li><input type="radio"/> Use Not Empty Tree Keys</li> <li><input type="radio"/> Use This Audit Only In Batch</li> </ul>
<div style="background-color: #2c4e64; color: white; padding: 2px;"><b>Tree Selectors</b></div> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> Static Selector</li> <li><input type="radio"/> Dynamic Selectors</li> </ul>	<div style="background-color: #2c4e64; color: white; padding: 2px;"><b>Tree Change Message Options</b></div> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> Send Tree Change Message</li> <li><input type="radio"/> Don't send Tree Change Message</li> </ul>
<div style="background-color: #2c4e64; color: white; padding: 2px;"><b>Selector Options</b></div> <ul style="list-style-type: none"> <li><input type="radio"/> Single Values</li> <li><input checked="" type="radio"/> Range of Values (&gt;=...&lt;=)</li> <li><input type="radio"/> Range of Values (BETWEEN)</li> </ul>	

<b>Field or Control</b>	<b>Description</b>
<b>Access Methods</b>	<p>Select an access method from:</p> <ul style="list-style-type: none"> <li>• <i>Use Literal Values</i>: Eliminates a SQL join by retrieving the detail ranges associated with the selected node and coding them in the SELECT statement.</li> </ul> <hr/> <p><b>Note:</b> This option is not available for use with winter trees.</p> <hr/> <ul style="list-style-type: none"> <li>• <i>Sub-SELECT Tree Selector</i>: Instead of adding the tree selector to the FROM list of the main query, the tree selector criteria and its relation to the data in the main query is within an EXISTS clause in the WHERE portion of the main query. This is called a <i>correlated subquery</i>.</li> <li>• <i>Join to Tree Selector</i>: Includes the tree selector table in the FROM clause and uses join criteria to select the appropriate rows from the fact table. This method is sometimes used by PeopleSoft nVision, even when another method is specified, if tree node information is needed to produce the report.</li> <li>• <i>Use Application Defaults</i>: Uses the tree performance options specified in the applications that use this tree. PeopleSoft nVision defaults to the tree performance options specified in a PeopleSoft nVision layout's options. If performance options are not specified in PeopleSoft nVision, the PeopleSoft nVision's default performance options are used. For PeopleSoft Query, this option defaults to the query's sub-SELECT method.</li> </ul>
<b>Tree Selectors</b>	<p>Select a tree selector type from the following options:</p> <ul style="list-style-type: none"> <li>• <i>Static Selector</i>: A technique in which a selector represents the entire tree remains valid until the tree changes.</li> <li>• <i>Dynamic Selectors</i>: A technique in which PeopleSoft nVision creates a new tree selector for use in a section of a single report. The dynamic selector represents just the requested nodes.</li> </ul>

<b>Field or Control</b>	<b>Description</b>
<b>Selector Options</b>	<p>Select a selector option from the following values:</p> <ul style="list-style-type: none"> <li>• <i>Single Values</i>: Used only with dynamic selectors. This technique causes PeopleSoft nVision or PeopleSoft Query to build a selector using the individual detail values (from the detail table specified in the tree structure) that fall within the detail ranges of the selected nodes.</li> <li>• <i>Range of Values (&gt;= &lt;=)</i>: For a tree with ranges of values, this makes the selectors more compact (fewer rows) and less likely to become obsolete as detail values are added. For some database optimizers, the syntax <code>fieldname &gt;= RANGE_FROM_nn AND fieldname &lt;= RANGE_TO_nn</code> gets a better access plan than BETWEEN.</li> <li>• <i>Range of Values (BETWEEN)</i>: Similar to the other Range of Values selector, but use the syntax <code>fieldname BETWEEN RANGE_FROM_nn AND RANGE_TO_nn</code>. This is a better choice for ranged selectors on most database platforms.</li> </ul>
<b>Auditing All Default Values</b>	<hr/> <p><b>Note:</b> The <b>Auditing All Default Values</b> group box is read-only when you work with winter trees.</p> <hr/> <p>If you've selected the <b>All Detail Values in this Tree</b> option on the Tree Definition and Properties page and clicked the <b>Performance Options</b> link, you can select from the following values:</p> <ul style="list-style-type: none"> <li>• <i>Use All Tree Keys (Default)</i>: This is the existing default auditing behavior. Use this option if the performance time is acceptable.</li> <li>• <i>Use Not Empty Tree Keys</i>: If the performance time is unacceptable, attempt this option to expedite the process. If the performance time is still unsatisfactory, then attempt the <i>Use This Audit Only in Batch</i> option.</li> <li>• <i>Use This Audit Only in Batch</i>: If you select this option, the <b>All Detail Values in This Tree</b> option audit is ignored during online tree auditing or saving. Consequently, the <b>All Detail Values in This Tree</b> option audit is run only through the Application Engine tree audit process. Although Tree Manager allows you to proceed to save a tree as a valid tree, you should use the <i>Save Draft</i> option. After you've saved the tree, proceed to start the Application Engine auditing process.</li> </ul> <hr/> <p><b>Note:</b> Use this option only if the first two options fail to achieve the desired performance results.</p> <hr/>



<b>Field or Control</b>	<b>Description</b>
<b>Tree Change Message Options</b>	Select a Tree Change Message option from the following: <ul style="list-style-type: none"><li data-bbox="865 310 1458 363">• <i>Send Tree Change Message</i>: Select this option to send a TREE_CHANGE message when Tree changes are made.</li><li data-bbox="865 394 1458 478">• <i>Don't send Tree Change Message</i>: Select this option if there are no subscribers to TREE_CHANGE service operations.</li></ul>



## Chapter 5

# Maintaining Trees

---

## Maintaining Trees

This topic discusses how to maintain trees.

### Performing Audits and Deleting Trees

Use the Tree Maintenance page (PSTREEMAIN) to audit a closed tree, copy a tree, delete a tree, or view a tree.

Navigation:

**Tree Manager > Tree Utilities > Copy/Delete Trees**

This example illustrates the fields and controls on the Tree Maintenance page. Definitions for the fields and controls appear following the example.

The screenshot shows the 'Tree Maintenance' page with two tabs: 'Tree Maintenance' (selected) and 'Tree Structure Maintenance'. Below the tabs is the title 'Tree Maintenance'. A table titled 'Tree Definitions' contains the following data:

Select	Key Type	User Key	Tree Name	Effective Date	Valid Tree
<input type="checkbox"/>	SetId	QEDM1	QE_DEPT_DYNAMIC	01/01/1999	Valid Tree
<input type="checkbox"/>	SetId	QEDM2	QE_ACCOUNTS	01/01/1900	Valid Tree
<input type="checkbox"/>	SetId	QEDM2	QE_DEPT_SEC	01/01/2001	Valid Tree
<input type="checkbox"/>	SetId	QEEU	QE_CUBT_PRODUCTS	02/27/2009	Valid Tree

Below the table are four buttons: 'Perform Audits', 'Copy', 'Delete', and 'View'. The table also includes a header row with 'Customize | Find | View All | First 21-24 of 24 Last'.

<b>Field or Control</b>	<b>Description</b>
<b>Key Type</b>	<p>Displays the key type associated with this tree.</p> <ul style="list-style-type: none"> <li>• <i>SetID</i>: The tree is identified by tree name and setID.</li> <li>• <i>Business Unit</i>: The tree is identified by a business unit.</li> <li>• <i>User Defined Node Key</i>: The tree is identified by a user-defined key.</li> <li>• <i>None</i>: The tree does not contain an additional key. It is keyed only by tree name and effective date.</li> </ul>
<b>User Key</b>	<p>Displays the key value.</p> <p>This field is blank if the key type is <i>None</i>.</p>
<b>Valid Tree</b>	<p>Displays the status of the tree.</p>
<b>Perform Audits</b>	<p>To audit a tree, select its check box and click this button.</p> <p>The <b>Last Audit</b> field for the tree changes to <i>Valid Tree</i> if the tree passes the audit. If the tree fails the audit, the <b>Last Audit</b> field changes to <i>Draft Tree</i>.</p> <hr/> <p><b>Note:</b> You can get a detail listing of audit errors by running the Repair Tree batch program.</p> <hr/>
<b>Copy</b>	<p>To access the Tree Definition and Properties page and copy a tree, select a tree check box and click this button.</p>
<b>Delete</b>	<p>To delete a tree, select its check box and click this button.</p>
<b>View</b>	<p>To access the Tree Viewer page and view a tree, select a tree check box and click this button.</p>

---

**Note:** Trees secured by PeopleSoft Object Security for anything but full access are not listed and cannot be updated or deleted from the Tree Maintenance page.

---

### Related Links

[Using the Repair Tree Program](#)

## Copying Trees

Use the Copy Tree page (PSTREEDEFN) to copy a tree.

Navigation:



**Tree Manager > Tree Utilities > Copy/Delete Trees >Copy button**

This example illustrates the fields and controls on the Copy Tree page.


### Copy Tree


**\*Tree Name:**


**\*Structure ID:**

**\*Effective Date:**   **\*Status:**  

**\*Description:**

**\*Category:**  

**\*Use of Levels:**   [Performance Options](#)

**\*SetID:**  

Audits	Item Counts
<input type="checkbox"/> All Detail Values in this Tree <input type="checkbox"/> Allow Duplicate Detail Values  <input type="button" value="Perform Audits"/>	Node Count: 21 Leaf Count: 21 Level Count: 0 Branch Count: 0

Make any necessary changes and click the **Copy** button.

## Viewing Trees

Use the Tree Viewer page (PSTREEVIEWER) to view a tree.

Navigation:

**Tree Manager > Tree Utilities > Copy/Delete Trees >View button**

This example illustrates the fields and controls on the Tree Viewer page.

**Tree Viewer**

**SetID:** QEDM1                      **Effective Date:** 01/01/1999

**Tree Name:** QE\_DEPT\_DYNAMIC

Collapse All | Expand All      Find                      First Page ◀ 11 of 42 ▶ Last Page

- 📁 00001 - Corporate Headquarters
  - 📁 []
  - 📁 21700 - Toronto Office
  - 📁 10100 - Office of the President
  - 📁 10600 - Branch Office Administration
  - 📁 11000 - Information Systems & Technlgy
  - 📁 11200 - Corporate Sales
  - 📁 41000 - Engineering
  - 📁 50000 - Manufacturing Division
  - 📁 55100 - Shipping
  - 📁 8000 - Intensive Care Unit

Close

After viewing the tree information, click the **Close** button to return to the Tree Maintenance page.

**Note:** Trees displayed in view mode do not differentiate between standard nodes and branches. All nodes expand and collapse so that you can view the whole tree. Use the **Expand Node Hierarchy** icon to expand all child nodes.

If the multiuser environment is enabled, users will not be able to delete a tree if any branch of the tree – or the tree itself – is checked out by any user.

## Maintaining Tree Structures

This topic discusses how to maintain tree structures.

### Deleting Tree Structures

Use the Tree Structure Maintenance page (PSTREESTRCTMAINT) to copy a tree structure, delete a tree structure, or view a tree structure.

Navigation:

Select **Tree Manager > Tree Utilities > Copy/Delete Trees > Tree Structure Maintenance tab**

This example illustrates the fields and controls on the Tree Structure Maintenance page. Definitions for the fields and controls appear following the example.

Tree Maintenance
Tree Structure Maintenance

### Structure Maintenance

Tree Structures				
Select	Tree Structure ID	Description	Node Record Name	Detail Record Name
<input type="checkbox"/>	CUBT_PRODUCTSTRUCT	Product structure.	TREE_NODE_TBL	PSCUBTPRODUCT
<input type="checkbox"/>	CUBT_REGIONSTRUCT	Regional Structures	TREE_NODE_TBL	PSCUBTREGION
<input type="checkbox"/>	QE_ACCOUNTS	Account Hierarchy	TREE_NODE_TBL	QE_ACCOUNT_TBL
<input type="checkbox"/>	QE_ACE_848_EMPL	ACE 848 Employee Tree	TREE_NODE_TBL	
<input type="checkbox"/>	QE_ACE_AFTREE	QE ACE All Function Tree	TREE_NODE_TBL	
<input type="checkbox"/>	QE_ACE_DGC_BU	Bus Unit Tree for DGC Model	TREE_NODE_TBL	
<input type="checkbox"/>	QE_ACE_DGC_DEPT	Department Tree for DGC Model	TREE_NODE_TBL	
<input type="checkbox"/>	QE_ACE_DGC_DTRG	DAta Range	TREE_NODE_TBL	QE_ACE_DGC_DTRG
<input type="checkbox"/>	QE_ACE_DGC_EMPD	EMPLOYEE ID	TREE_NODE_TBL	QE_ACE_DGC_EMPD
<input type="checkbox"/>	QE_ACE_DGC_EMPLID	QE_ACE_DGC_EMPLID_Navigation	TREE_NODE_TBL	
<input type="checkbox"/>	QE_ACE_DGC_PRODID	ProductId Tree	TREE_NODE_TBL	QE_ACE_PRDID_VW
<input type="checkbox"/>	QE_ACE_PRODUCTS	Product Tree for ACE Smoke Tes	TREE_NODE_TBL	
<input type="checkbox"/>	QE_CUBT_PRODUCTS	For Cube Manager Testing	TREE_NODE_TBL	QE_CUBTPRODUCT
<input type="checkbox"/>	QE_CUBT_REGSTRUCT	For Cube Manager Testing	TREE_NODE_TBL	QE_CUBTREGION
<input type="checkbox"/>	QE_PERS_DATA	Personal Data	TREE_NODE_TBL	QE_EMPLOYEE
<input type="checkbox"/>	QE_PROJECT	Project Data	QE_PROJECT_TBL	

Copy
Delete
View

<b>Field or Control</b>	<b>Description</b>
<b>Node Record Name</b>	Displays the name of the record that stores information about the tree nodes.
<b>Detail Record Name</b>	Displays the name of the record definition that corresponds to the kind of detail value in the structure.
<b>Copy</b>	To access the Copy Tree Structure page and copy a structure, select a structure check box, and click this button.
<b>Delete</b>	To delete a tree structure, select its check box and click this button.  You cannot delete a structure that is currently being used by a tree.
<b>View</b>	To access the Tree Structure Properties page and view a structure, select a structure check box and click this button.

---

**Note:** Tree structures secured by PeopleSoft Object Security for anything but full access are not listed and cannot be updated or deleted from the Tree Structure Maintenance page.

---

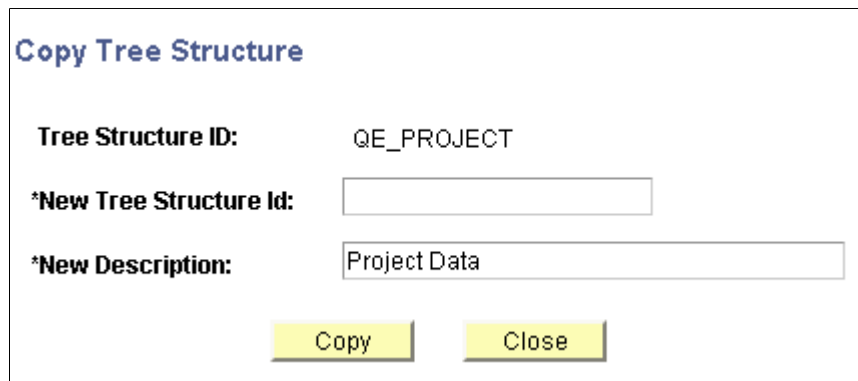
## Copying Tree Structures

Use the Copy Tree Structure page (PSTREESTRCTCOPY) to copy a tree structure.

Navigation:

1. Select **Tree Manager > Tree Utilities > Copy/Delete Trees**.
2. Select the Tree Structure Maintenance tab.
3. Select a tree structure and click the **Copy** button.

This example illustrates the fields and controls on the Copy Tree Structure page.



The screenshot shows the 'Copy Tree Structure' page. It has a title 'Copy Tree Structure' in blue. Below the title, there are three input fields: 'Tree Structure ID' with the value 'QE\_PROJECT', '\*New Tree Structure Id' with an empty text box, and '\*New Description' with the value 'Project Data'. At the bottom, there are two yellow buttons: 'Copy' and 'Close'.

To copy a tree structure:

1. In the Copy Tree Structure page, enter a new tree structure ID.
2. Change the description in the **New Description** field.
3. Click the **Copy** button.

You return to the Tree Structure Maintenance page. The new tree structure is listed.

## Viewing and Editing Tree Structures

Use the Tree Structure Properties page (PSTREESTRCTDEFN) to view a tree structure.

Navigation:

1. Select **Tree Manager > Tree Utilities > Copy/Delete Trees**.
2. Select the Tree Structure Maintenance tab.
3. Select a tree structure and click the **View** button.



This example illustrates the fields and controls on the Tree Structure Properties page.

Select the Levels, Nodes, and Details tabs to view additional information.

Click the **OK** or **Cancel** button to return to the Tree Structure Maintenance page.

### Related Links

[Understanding Steps to Create Trees](#)

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## Subscribing to TREE\_CHANGE Service Operations

This topic discusses how to subscribe to TREE\_CHANGE service operations.

### Understanding TREE\_CHANGE Service Operations

Every time you perform an action in PeopleSoft Tree Manager to change a tree definition (such as delete, any kind of save, copy, branch, or unbranch), a TREE\_CHANGE service operation is published based on the Tree Key information using the PSTREEPUBSUB record.

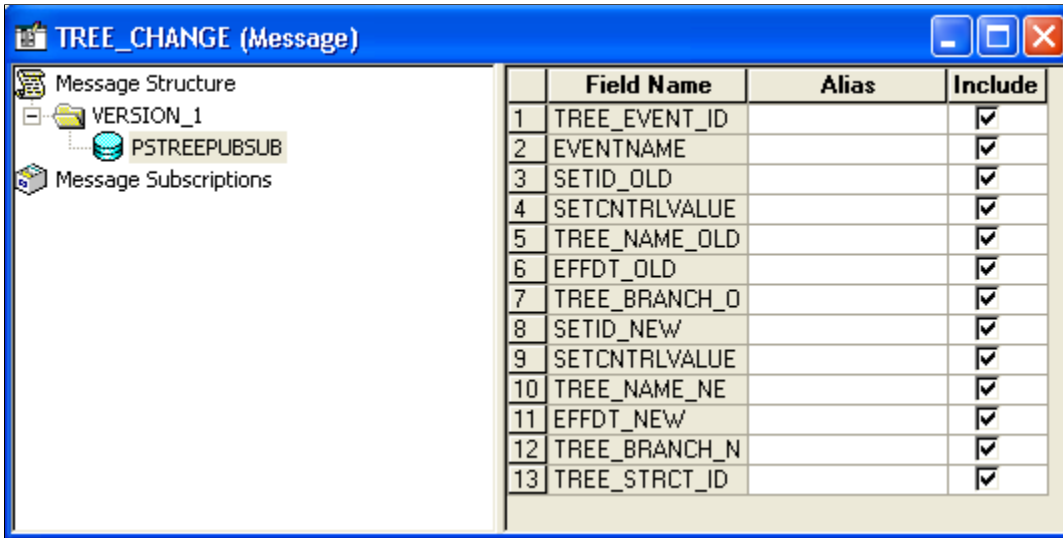
---

**Note:** From PeopleTools 8.48, sending a TREE\_CHANGE service operation every time tree changes are made is optional. To improve performance, you can select not to send a TREE\_CHANGE service operation whenever you change a tree definition. The default setting is sending a TREE\_CHANGE service operation. This service operation is not saved to the database.

---

If applications want to use TREE\_CHANGE service operation, they must create a service operation handler. The service operation handler runs every time this service operation is published.

This example shows the TREE\_CHANGE service operation.




---

**Note:** The field **EVENT\_ID** is defined in the Financials database as a Char, 20 field, and is used by a number of applications. In PeopleTools PSTREEPUBSUB, the field was defined as a Number, 6. To avoid conflicts, EVENT\_ID has been removed from PSTREEPUBSUB and replaced with TREE\_EVENT\_ID.

This change may affect applications who subscribe to the TREE\_CHANGE event, and check for EVENT\_ID in PeopleCode using field name.

---

## Creating a Notification PeopleCode

To create a notification PeopleCode:

1. Select **Go > PeopleTools > Application Designer**.
2. Create an application package and an application class that implements PS\_PT: Integration: INotificationHandler interface.

For a subscription, you use the INotificationHandler application class and the OnNotify method, and optionally use the OnError method for error handling.

---

**Note:** This application package PeopleCode is tied to the TREE\_CHANGE service operation through a service operation handler.

---

This example shows an application class that is used to subscribe to TREE\_CHANGE service operation (1 of 2).

```

TREE_CHANGE_SUB_TEST (application_class) OnExecute
import PS_PT:Integration:INotificationHandler;

class TREE_CHANGE_SUB_TEST implements PS_PT:Integration:INotificationHandler
  method TREE_CHANGE_SUB_TEST();
  method OnNotify(&MSG As Message);
private
  method LogToFile(&fName As string, &txt As string);
end-class;

/* constructor */
method TREE_CHANGE_SUB_TEST
  rem do nothing;
end-method;

method OnNotify
  /* &MSG as Message */
  /* Extends/implements PS_PT:Integration:INotificationHandler.OnNotify */
  /* Variable Declaration */

  Local Message &request_MSG;
  Local Rowset &request_RS, &response_RS;
  Local Record &PSTREEPUBSUB;
  Local any &QryNode, &I;

  /* Subscription PeopleCode */
  /* Get the request message from queue */
  &request_MSG = &MSG;

  /* Get the request rowset object from the buffer */
  &request_RS = &request_MSG.GetRowset();

```

This example shows an application class that is used to subscribe to TREE\_CHANGE service operation (2 of 2).

```

TREE_CHANGE_SUB_TEST (application_class) OnExecute

/* Extract the record from the message rowset*/
&PSTREEPUBSUB = &request_RS.GetRow(1).GetRecord(Record.PSTREEPUBSUB);
/* Get Changes */
If &PSTREEPUBSUB <> Null Then
    Local string &setIdOld = PSTREEPUBSUB.SETID_OLD.Value;
    Local string &setcntrlvalueOld = PSTREEPUBSUB.SETCNTRLVALUE_OLD.Value;
    Local string &treenameOld = PSTREEPUBSUB.TREE_NAME_OLD.Value;
    Local string &effdtOld = PSTREEPUBSUB.EFFDT_OLD.Value;
    Local string &treebranchOld = PSTREEPUBSUB.TREE_BRANCH_OLD.Value;
    Local string &setidNew = PSTREEPUBSUB.SETID_NEW.Value;
    Local string &setcntrlvalueNew = PSTREEPUBSUB.SETCNTRLVALUE_NEW.Value;
    Local string &treenameNew = PSTREEPUBSUB.TREE_NAME_NEW.Value;
    Local string &effdtNew = PSTREEPUBSUB.EFFDT_NEW.Value;
    Local string &treebranchNew = PSTREEPUBSUB.TREE_BRANCH_NEW.Value;
End-If;

/* Do something with a received message;
for example, log message to a file */
Local string &logstr = "Tree has been changed from " | Char(10);
&logstr = &logstr | &setIdOld | " " | &setcntrlvalueOld | " ";
&logstr = &logstr | &treenameOld | " " | &effdtOld | " " | &treebranchOld;
&logstr = &logstr | Char(10) | "to" | Char(10);
&logstr = &logstr | &setIdOld | " " | &setcntrlvalueNew | " " | &setcntrlvalueNew | " ";
&logstr = &logstr | &treenameNew | " " | &effdtNew | " " | &treebranchOld;

    %This.LogToFile("c:\temp\subscription.log", &logstr);
end-method;

method LogToFile
    /* &fName as String, +/
    /* &txt as String +/
    Local File &myFile;

    &myFile = GetFile(&fName, "W", "A", %FilePath_Absolute);
    If &myFile.IsOpen Then
        &myFile.WriteLine(&txt);
        &myFile.Close();
    End-If;
end-method;

```

In the previous example, TREE\_CHANGE\_SUB\_TEST application class has three methods. The constructor, TREE\_CHANGE\_SUB\_TEST and the event handler, OnNotify are required. TREE\_CHANGE\_SUB\_TEST application class has an extra method LogToFile that is used for testing purposes only. This message records a data retrieved from a message being received.

## Related Links

"Understanding Sending and Receiving Messages" (Integration Broker)

## Configuring Integration Broker

To configure Integration Broker in PIA:

1. Select **PeopleTools > Integration Broker > Integration Setup > Services Operation Definitions**.  
The search page appears.
2. Select *TREE\_CHANGE* service operation name, and click the **Search** button.
3. Click the **TREE\_CHANGE** link.

The General page appears.

- On the General page, select the **Generate Local-to-Local** option.

Local-to-local routing is auto-generated.

This example illustrates the fields and controls on the General page - Service Operation.

The screenshot displays the 'General' tab of a service operation configuration page. The main configuration area includes fields for 'Service Operation' (TREE\_CHANGE), 'Operation Type' (Asynchronous - One Way), '\*Operation Description' (TREE DEFINITION CHANGED MSG), 'Operation Comments', 'Owner ID' (PeopleTools), and 'Operation Alias'. There are checkboxes for 'User/Password Required' and 'Req Verification' (set to None). A 'Service Operation Security' link is also present.

The 'Default Service Operation Version' section contains fields for '\*Version' (VERSION\_1), 'Version Description', and 'Version Comments'. It includes checkboxes for 'Default' and 'Active'. Below this is a 'Routing Status' table:

Routing Status	
Any-to-Local	Does not exist
Local-to-Local	Does not exist
Local-to-Atom	Does not exist

Below the routing status is a 'Runtime Schema Validation' section with checkboxes for 'Request Message' and 'Non-Repudiation'. To the right is a 'Routing Actions Upon Save' section with checkboxes for 'Generate Any-to-Local' and 'Generate Local-to-Local'.

The 'Message Information' section at the bottom shows 'Type' (Request), 'Message.Version' (TREE\_CHANGE.VERSION\_1), and '\*Queue Name' (TREE\_MAINT). It includes links for 'View Message', 'View Queue', and 'Add New Queue'.

At the bottom of the page are buttons for 'Save', 'Return to Service', and 'Add Version'.

## Related Links

"Understanding Managing Service Operations" (Integration Broker)

## Creating a Service Operation Handler

Use the Handlers page to create a service operation handler.

Navigation:

**PeopleTools > Integration Broker > Integration Setup > Services Operation Definitions > General > Handlers**

This example illustrates the fields and controls on the Handlers page - Service Operation.

General **Handlers** Routings

Service Operation TREE\_CHANGE  
 Default Version VERSION\_1  
 Operation Type Asynchronous - One Way

**Handlers** Personalize | Find | View All | | First 1 of 1 Last

	*Name	*Type	Sequence	*Implementation	*Status		
1	TREE_CHANGE	On Notify	1	Application Class	Active	Details	

[Return to Service](#)

To create a service operation handler:

1. Select **PeopleTools > Integration Broker > Integration Setup > Services Operation Definitions**.
2. Select *TREE\_CHANGE* service operation name, and click the **Search** button.
3. Click the **TREE\_CHANGE** link.
4. Click the Handlers tab from the General page, and enter a handler name.
5. Select the *On Notify* option from the **Type** drop-down list.
6. Select the *Application Class* option from the **Implementation** drop-down list.
7. Click the **Details** link.

The Handler Details page appears.

8. Populate the required fields with data from the application package that you created.

This example illustrates the fields and controls on the Handler Details page populated with data from the application package.

### Handler Details

**Handler Name** TREE\_CHANGE  
**Handler Type** On Notify  
**Description** TREE\_CHANGE Message Handler  
**Comments** Message appears when tree definition is changed.  
**Handler Owner**

---

**Application Class**

**\*Package Name** EMAIL\_MSG  
**\*Path** :  
**Class ID** EMAIL\_GUARANTEED  
**Method** OnNotify

---

**Note:** There is a colon in the **Path** field.

---

### Related Links

"Adding Handlers to Service Operations" (Integration Broker)

## Setting Full Access to the Permissions List

To set full access to the corresponding permission list:

1. Select **PeopleTools >Integration Broker >Integration Setup >Services Operation Definitions**.
2. Select *TREE\_CHANGE* service operation name, and click the **Search** button.
3. Click the **TREE\_CHANGE** link.
4. In the General page, click the **Service Operation Security** link.

The Web Service Access page appears.

5. Set full access to corresponding permissions list, and click the **Save** button.

---

**Note:** For additional security setting, check whether the permission list used for your user includes TREE\_MAINT queue. Also, check whether TREE\_MAINT queue has full access rights.

---

This example illustrates the fields and controls on the Web Service Access page.

The screenshot shows the 'Web Service Access' page. At the top, the 'Operation' field is set to 'TREE\_CHANGE'. Below this is a table with two columns: 'Permission List' and 'Access'. The 'Permission List' column contains the value 'PTPT1200'. The 'Access' column contains a dropdown menu set to 'Full Access'. The table has a search icon next to the 'Permission List' field and '+' and '-' buttons next to the 'Access' dropdown. Above the table, there are navigation controls including 'Personalize', 'Find', 'First', '1 of 1', and 'Last'.

## Testing a Subscription Process

To test a TREE\_CHANGE subscription process:

1. Select Tree Manager, Tree Manager.
2. Search for an existing tree and open it in the Tree Manager page.
3. Change any tree and save it.

---

**Note:** You can also use Save As functionality to create a new tree.

---

4. Select **PeopleTools > Integration Broker > Service Operations Monitor > Monitoring > Monitor Asynchronous Services**.
5. Select the Subscription Contracts tab.
6. Select a node in the **Node Names** field.
7. Select the *TREE\_CHANGE* option from the **Service Operation** drop-down list.
8. Select the *TREE\_MAINT* option from the **Queue Name** drop-down list.
9. Click the **Refresh** button.

A list of service operations are displayed under your test subscription.



This example illustrates the fields and controls on the Subscription Contracts page with the list of service operations received under test subscription.

The screenshot shows the 'Subscription Contracts' page with the following search filters: Node Name (QE\_LOCAL), Service Operation (TREE\_CHANGE), Queue Name (TREE\_MAINT), Transaction ID, and Correlation ID. There are checkboxes for 'Archived' and 'User Level View', and a 'Status' dropdown set to 'Done'. A 'Time Period' section includes 'From Date', 'To Date', 'From Time', and 'To Time' fields, along with a 'Refresh' button. Below the filters is a 'Result' table with columns: Select, Transaction ID, Queue Name, Publishing Node, Segment Number, Service Operation, Service Operation Version, Sub Queue, Status, Time Stamp, and Origin Trans ID. Two rows of data are visible, each with a 'Details' link. At the bottom, there are 'Select All', 'Deselect All', 'Resubmit', and 'Cancel' buttons.

When you click the **Details** link in the Results section of the Subscription Contracts page, the Asynchronous Details page appears.

This example illustrates the fields and controls on the Asynchronous Details page.

The screenshot shows the 'Asynchronous Details' page for Transaction ID 8348ea0b-3acc-11e2-b845-9c0fa1005d20. It displays fields for External Service Name (TREE\_CHANGE.VERSION\_1), Publishing Node (QE\_LOCAL), Queue Name (TREE\_MAINT), Queue Status (Running), Queue Sequence ID (73), Sub Queue, and Original Publishing Node (QE\_LOCAL). There is a '\*Segment' dropdown set to '1' and buttons for 'Refresh', 'Delete', and 'View XML'. Below this is a table with columns: Action Name, \*Segment, Status, and buttons for 'Resubmit', 'Cancel', 'View Error/Info', 'View IB Info', and 'Handler Tester'. The table contains one row for 'TREE\_CHANGE' with segment '1' and status 'Done'. At the bottom, there is a 'Return to Search' button.

**Note:** If a subscription PeopleCode test program is used as in previous example, you can view the file being generated (Windows OS) as a part of a test subscription class at *e:\temp\subscription.txt*.



## Chapter 6

# Auditing and Repairing Trees

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## Understanding the Auditing and Repairing of Trees

Tree repairs should be performed on trees that are having problems or have had major changes made to them.

Before using the repair programs, you should first run audits to learn which trees, if any have problems and which utility will repair the damaged tree. Review the audit reports to determine the correct solution for repairing your tree. You may need to run more than one utility program.

The Repair Tree program is designed for administrators who need a wide range of utilities with which to work. Besides containing various utilities for repairing trees, the Repair Tree program also includes the Tree Audits utility.

The Tree Auditor program *is only* the Tree Audits utility, and is designed for users who only need to audit trees.

Running the utility programs may result in a large number of updates to the tree. Because the system automatically puts a *lock* on a tree while the process is running, you should run these programs during off-work hours, to lower the risk of users trying to access the tree.

You should also perform a backup of your tree tables before running the repair programs.

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**Note:** If you expect that saving a tree will take an especially long time due to an audit running as a part of saving process or on account of large, memory-intensive trees, PeopleSoft recommends that you save the trees as drafts, then run the audits with Application Engine using the Repair Tree or Tree Auditor programs. After the audits have completed without finding any problems, the tree status will be automatically changed to *Valid Tree*.

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## Using the Repair Tree Program

Use the Repair Tree page (RUN\_TREE\_UTILITIES) to audit, troubleshoot, or repair problem trees.

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**Note:** Use the Repair Tree Application Engine program to audit and repair trees. You can also use the Tree Auditor Application Engine program to audit trees.

---

Navigation:

Access the Repair Tree page by selecting **Tree Manager** > **Tree Utilities** > **Repair Trees**.

Optionally, access the batch audit function by selecting **Tree Manager** > **Tree Auditor**.

This example illustrates the fields and controls on the Repair Tree page. Definitions for the fields and controls appear following the example.

## Repair Tree

Run Control ID: 111 [Report Manager](#) [Process Monitor](#) Run

**Tree Utility Type**

\*Tree Utility:  ▼

**Audit Scope**

Single Tree  Multiple Trees

**Tree Definition**

Tree Name:  🔍    SetId:  🔍

**Date Selection**

Effective Date of Tree  🔍

As of Current Date

As of Specific Date

All Trees

[View Results](#)

<i>Field or Control</i>	<i>Description</i>
<b>Report Manager</b>	Click the link to access the report manager inquiry page.
<b>Process Monitor</b>	Click the link to access the process manager inquiry page.  <b>Note:</b> If any trees are skipped while running any repair or audit programs due to an existing checkout, you see a status of <i>Warning</i> after the repair or audit program has completed. When this occurs, you should check the log to determine which trees have been skipped, and then rerun the appropriate program after the checked-out trees have been released.  See "Viewing the Process List" (Process Scheduler).
<b>Run</b>	Click to run a Process Scheduler request.

<b>Field or Control</b>	<b>Description</b>
<p><b>Tree Utility Type</b></p>	<p><b>Note:</b> Typically, you would run the audits first, and then select a repair program as indicated by the audit results.</p> <hr/> <p>Select a tree utility from the following options:</p> <ul style="list-style-type: none"> <li>• <i>Tree Audits:</i> Audits a selected tree or subset of trees.</li> <li>• <i>Correct Level Numbers:</i> Ensures level numbers are correct. Reset node numbers are equal to the parent node's level number plus one.</li> <li>• <i>Correct Parent Node Numbers:</i> Ensures parent node numbers are correct in the tree node table.</li> <li>• <i>Delete Orphan Tree Objects:</i> Ensures there are no orphan nodes or levels.</li> </ul> <p>When running this repair program and specifying a tree, the program only deletes orphan nodes and leaves, not orphan levels.</p> <p>When running the program for all trees, this program deletes orphan nodes and leaves, and then deletes orphan levels. This is because orphan levels are not tied to a specific tree.</p> <p>Orphans can be the result of the following three situations:</p> <ol style="list-style-type: none"> <li>1. The parent node that the orphan leaf refers to no longer exists. <ul style="list-style-type: none"> <li>These orphans are removed when running this program either for a specific tree or all trees.</li> </ul> </li> <li>2. The tree name that the orphan leaf refers to no longer exists. <ul style="list-style-type: none"> <li>These orphans are removed <i>only</i> when running this program for all trees.</li> </ul> </li> <li>3. The Query Access Group record no longer exists in PSRECDEFN. <ul style="list-style-type: none"> <li>These orphans are removed when running this program either for a specific tree or all trees.</li> </ul> </li> </ol> <ul style="list-style-type: none"> <li>• <i>Remove Tree Branches:</i> Removes all branches from the selected tree.</li> <li>• <i>Remove Tree Reservations:</i> Cancels all current checkouts. This utility is helpful because if you try to audit or repair any trees that are currently reserved, the audit or repair utility will skip the reserved trees. For this reason, you can use this utility before running any audit or repair tree utility to ensure that the audits or repairs are performed on <i>every</i> tree. Also use this utility during emergency situations.</li> </ul>

<b>Field or Control</b>	<b>Description</b>
	<p><b>Note:</b> PeopleSoft recommends you use this utility judiciously. When you run this utility, all unsaved changes of users currently editing trees will be lost.</p> <hr/> <ul style="list-style-type: none"> <li>• <i>Reset Tree Node Gaps:</i> Re-gaps a tree, so that intervals between tree nodes and their node numbers are evenly distributed. Consider running this program if you start to get messages that nodes can no longer be inserted into a tree.</li> </ul> <hr/> <p><b>Note:</b> The SQR program PTUGAPTR is also available for <i>re-gaps</i>. PTUGAPPTR.SQR is an interactive SQR program which prompts for user inputs and can only run interactively from a Windows client.</p> <hr/> <ul style="list-style-type: none"> <li>• <i>Update Tree Table Statistics:</i> Calls the databases Update Statistics utility on the PeopleSoft Tree Manager tables. This program can be run whenever large changes have been made to trees or a large tree is imported or deleted from the database.</li> <li>• <i>Report Only:</i> Select to run a report to view results prior to updating the tree. Not available for all utilities.</li> </ul>
<b>Audit Scope</b>	<p>Available options are:</p> <ul style="list-style-type: none"> <li>• <i>Single Tree:</i> Select to run the selected utility for a single tree. Not all utilities can be run for single trees.</li> <li>• <i>Multiple Trees:</i> Select to run the selected utility for multiple trees. Fields in the <b>Tree Definition</b> group box become unavailable. Not all utilities can be run for multiple trees.</li> </ul>
<b>Tree Definition</b>	<p>Available options are:</p> <ul style="list-style-type: none"> <li>• <i>Tree Name:</i> Select a tree to audit or repair.</li> <li>• <i>SetId, Business Unit, or Tree Key Value:</i> Select the setID, business unit, or tree key value for the specified tree. The field is not available if the selected tree does not have a setID, business unit, or tree key value.</li> </ul>

<b>Field or Control</b>	<b>Description</b>
<b>Date Selection</b>	<p>Available options are:</p> <ul style="list-style-type: none"> <li>• <i>Effective Date of Tree:</i> You can select an effective date to run the audit on a single instance of the tree.</li> <li>• <i>As of Current Date:</i> Select to audit trees which have the most recent effective date. If you select <b>Single Tree</b> in the <b>Audit Scope</b> group box and select a specific tree, only the instance of the tree with the most recent effective date will be audited. If you select the <b>Multiple Trees</b> option in the <b>Audit Scope</b> group box, all trees whose effective dates are current will be audited. This option is only available for the Tree Audits utility.</li> <li>• <i>As of Specific Date:</i> Select to enter a specific date. If you select the <b>Single Tree</b> option in the <b>Audit Scope</b> group box and select a specific tree, only the instance of the tree whose effective date matches the specified date will be audited. If you select the <b>Multiple Trees</b> option in the <b>Audit Scope</b> group box, all trees whose effective dates match the specified date will be audited. This option is only available for the Tree Audits utility.</li> <li>• <i>All Trees:</i> Select to audit all trees. If you select the <b>Single Tree</b> option in the <b>Audit Scope</b> group box and select a specific tree, <i>all</i> instances of this tree will be audited, regardless of effective dates. If you select the <b>Multiple Trees</b> option in the <b>Audit Scope</b> group box, all instances of all trees will be audited. When you select <b>Multiple Trees</b>, fields in the <b>Tree Definition</b> group box become unavailable. This option is only available for the Tree Audits utility.</li> </ul>
<b>View Results</b>	<p>Click the link to open a new browser instance that displays the Batch Report page.</p> <p>Enter a run control ID to view the results from running audits or a utility program.</p>

## Audits Performed

The following table lists the types of audits performed from the Repair Tree program. These audits differ from those performed on the Tree Definition and Properties page.

<b>Audit Type</b>	<b>Checks For</b>	<b>Purpose</b>
Detail Values	Orphan tree leaves.	Lists detail values that refer to an invalid tree node number.

<b><i>Audit Type</i></b>	<b><i>Checks For</i></b>	<b><i>Purpose</i></b>
Detail Values	Detail values not found in the tree.	Lists any detail values that are found in application table but are not defined in the tree.  This audit is only performed if the <b>All Detail Values</b> option on the tree's Definition and Properties page is selected.
Detail Values	Duplicate detail values.	Lists any detail values that are defined more than once in the tree.  This audit is only performed if the <b>Allow Duplicate Detail Values</b> option on the Definition and Properties page of tree is cleared.
Detail Values	Detail values with overlapping ranges.	Lists detail values that are defined as a range of values that overlap another detail value's range of values.  This audit is only performed if the <b>Allow Duplicate Detail Values</b> option on the tree's Definition and Properties page is cleared.
Detail Values	Nodes with no child nodes or detail values specified.	Lists any nodes that do not have any detail values or child nodes defined. This audit is performed for detail value trees only.
Node Audit	Nodes without a parent.	Lists tree nodes that refer to an invalid tree node number.
Node Audit	Tree node numbers that are greater than end numbers.	Lists tree nodes with end numbers greater than the node number.
Node Audit	Tree node end numbers that are greater than the end number of parent.	Lists tree nodes with end numbers greater than the parent node's end number.



<b><i>Audit Type</i></b>	<b><i>Checks For</i></b>	<b><i>Purpose</i></b>
Node Audit	Tree nodes with overlapping ranges.	Lists tree nodes whose node number and ending node number overlaps with another range of node numbers. <hr/> <b>Note:</b> When this occurs the tree is corrupted. <hr/>
Node Audit	Node level numbers that are less than the parent node's level number.	Lists any tree node with level numbers less than the level number of parent.
Structure Audit	A level record name in the Tree Structure table that does not exist in Record Definition table.	Lists tree structures that reference an invalid record name for the tree level application data.
Structure Audit	A node record name in the Tree Structure table that does not exist in Record Definition table.	Lists tree structures that reference an invalid record name for the tree node application data.
Structure Audit	A detail record name in the Tree Structure table that does not exist in Record Definition table.	Lists tree structures that reference an invalid record name for the tree detail values application data.
Structure Audit	A missing tree structure record.	Lists any trees that refer to a tree structure that is not found in the Tree Structure table.

### **Related Links**

"Understanding Report Manager" (Process Scheduler)

"Understanding Process Monitor" (Process Scheduler)

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## **Reviewing Audit Results**

Use the Batch Report page (PSBATCHREPORT) to view results of an audit.

Navigation:

**Tree Manager >Tree Utilities >Tree Audit Reports**

Alternatively, click the **View Results** link on the Tree Utilities page, click the **View Results** link on the Repair Tree page, or click the **View Results** link on the Tree Auditor page.

This example illustrates the fields and controls on the Batch Report page. Definitions for the fields and controls appear following the example.

## Batch Report

**Process Instance:** 82      **Run Control ID:** 111

**User ID:** PTDOCKN      **Run Date/Time:** 06/18/09 9:30:56AM

**Show Reports Criteria**

**Reports with Data**       **All Reports**

**Report List**      [Customize](#) | [Find](#) | [View All](#) | |      First ◀ 1-16 of 16 ▶ Last

Open Report	Report Content	Total Row Count
Open Report	Tree Structure table contains Level Record Name that does not exist in Record Definition table	0
Open Report	Tree Structure table contains Node Record Name that does not exist in Record Definition table	0
Open Report	Tree Structure table contains Detail Record Name that does not exist in Record Definition table	0
<a href="#">Open Report</a>	Parent Node Does Not Exist	15
Open Report	Orphan Tree Leaves	0
Open Report	Tree Node Numbers are Greater than End Number	0
Open Report	Tree Nodes' End Number is Greater than Parent's End Number	0
Open Report	Tree Nodes With Overlapping Ranges	0
Open Report	Node's Level Number is less than Parent's Level Number	0

<i>Field or Control</i>	<i>Description</i>
<b>Show Reports Criteria</b>	Available options are: <ul style="list-style-type: none"> <li>Select the <b>Reports with Data</b> option to list only those reports that contains data. This is the default value.</li> <li>Select the <b>All Reports</b> option to list all reports.</li> </ul>
<b>Report List</b>	Lists each available report, with report title and total row count.  Click the <b>Select</b> link to access each report. The <b>Select</b> link is inactive for reports with zero row count.

## Reviewing Individual Reports

Access a report page (PSBATCHREPORTLIST) to view individual reports.

Navigation:

1. Select **Tree Manager >Tree Utilities >Tree Audit Reports**.
2. Click the Select link for a report on the Repair Tree Report page.

Reports contain the following information:

- Instructions and recommendations on how to correct the problem.
- Tree identifying information, if more than one tree is affected. This includes:
  - setID
  - Set control value
  - Tree name
  - Effective date
- Node information for the affected nodes, which might include:
  - Node name
  - Node number
  - Node end number
  - Parent node
  - Parent node number
  - Parent level number
  - Range from
  - Range to

The following table discusses details on fixing problems associated with reports.

<b><i>Problem</i></b>	<b><i>Solution</i></b>
Parent node does not exist.	<p>If there are no other audit errors for this tree, then running the Correct Parent Node Numbers utility program should correct this problem.</p> <p>Do not run the Correct Parent Node Numbers utility program if there are other audit problems with this tree. The other errors should be addressed first before trying to correct problems by running the utility program.</p>
Orphan tree leaves.	Run the Delete Orphan Tree Objects utility to delete these records.

<b>Problem</b>	<b>Solution</b>
Tree node numbers are greater than end number.	<p>Use PeopleSoft Tree Manager to delete these nodes, and then run the Reset Tree Node Gaps utility program. You will then need to use PeopleSoft Tree Manager to reinsert the problem nodes.</p> <hr/> <p><b>Note:</b> Deleting a node causes all of its children to be deleted. Therefore, if the problem node has child nodes or leaves under it, you will have to recapture those as well. If it is not possible to use PeopleSoft Tree Manager to delete the problem nodes, call the PeopleSoft Support Center for help to analyze this problem.</p> <hr/>
End number of tree node is greater than end number of parent.	Use PeopleSoft Tree Manager to delete these nodes and then run the Reset Tree Node Gaps utility program. You will then need to use PeopleSoft Tree Manager to reinsert the problem nodes.
Tree nodes with overlapping ranges.	Use PeopleSoft Tree Manager to delete these nodes and then run the Reset Tree Node Gaps utility program. You will then need to use PeopleSoft Tree Manager to reinsert the problem nodes.
Level number of node is less than level number of parent.	<p>The level numbers can be corrected by either:</p> <ul style="list-style-type: none"> <li>• Switching the levels in PeopleSoft Tree Manager.</li> <li>• Running the Correct Level Numbers utility to reset all invalid level numbers on the tree.</li> </ul>

## Chapter 7

# Using TreeMover

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## Understanding TreeMover

This topic provides an overview of TreeMover.

### Purpose of TreeMover

TreeMover enables you to move PeopleSoft trees between different PeopleSoft application databases. It enables you to export a tree to a flat file and to import a tree from a flat file. TreeMover moves all types of tree data, including the tree definition, tree structure, tree nodes, tree leaves, tree node data, and tree level data.

TreeMover does not support branched trees. If you import a branched tree, the branches become regular tree nodes.

Advantages of using TreeMover instead of other methods of moving trees, such as Data Mover or custom SQR, include:

- TreeMover can move trees between different versions of PeopleSoft databases, for example, from a PeopleSoft Financials 7.5 database to a PeopleSoft EPM 8 database.
- Tree Mover can move tree node data (description, setID, effective date, and effective status) for trees that have node data stored in the PS\_TREE\_NODE\_TBL (the table that stores the tree node data is specified as part of the tree structure).
- Tree Mover can move tree level data (long description, short description, setID, effective date, and effective status) for trees that have level data stored in the PS\_TREE\_LEVEL\_TBL—the table that stores the tree level data is specified as part of the tree structure.
- TreeMover uses the tree APIs, which means the same logic used for the PeopleSoft Tree Manager application is used to load and unload trees using TreeMover.

All the same edit checks are performed on a tree created with TreeMover as are performed on a tree created manually with PeopleSoft Tree Manager because both use the same functionality to create the tree. Because TreeMover processes are initiated from standard PeopleSoft pages, the ability to import and export tree data can be restricted by using PeopleSoft standard security mechanisms for limiting access to pages. If a source tree uses branches, you need to recreate them after TreeMover finishes its import operation.

Here are some example tasks that you can use with TreeMover:

- Load a winter tree with nodes from a legacy financial database quickly and easily into PeopleSoft 8 databases.
- Automatically replace an account tree every month with a new tree based on current information.

---

**Note:** When the PS\_TREEBASEDIR environment variable is set, the flat file for the import process is located in %PS\_TREEBASEDIR%\<USER>\InputFilename and the flat file for the export process is located in %PS\_TREEBASEDIR%\<USER>\OutputFilename. You can override this and create another location using the Process Definition Override page.

TreeMover currently supports fixed-format files only.

TreeMover does not support related language tables.

When you export a tree containing text data, the data is saved in the codepage of the server—for example, CP1252 Western European on English Windows, or CP932 Shift-JIS on Japanese Windows. Any characters which are not valid in the server's codepage are converted into question mark characters.

---

TreeMover consists of three parts: a utility to export a tree from a PeopleSoft 8 database, a utility to import a tree into a PeopleSoft 8 database, and a utility to export a tree from a PeopleSoft 7.x database. The import and export functionality for a PeopleSoft 8 database is implemented as a PeopleSoft Application Engine application process. As with other Application Engine processes, they can be scheduled to run automatically from the Process Scheduler. The Application Engine process uses PeopleCode Tree APIs, PeopleCode File APIs, and file layout definitions. The utility that enables you to export trees from a PeopleSoft 7.x database is implemented as an SQR program (TMDOWNLD.SQR).

## Related Links

"Defining Process Type Definitions" (Process Scheduler)

"Understanding Setting PS\_FILEDIR, PS\_SERVDIR, and PS\_TREEBASEDIR Environment Variables" (Integration Broker)

"Setting PS\_FILEDIR, PS\_SERVDIR and PS\_TREEBASEDIR in Microsoft Windows Environments" (Integration Broker)

"Setting PS\_FILEDIR, PS\_SERVDIR, and PS\_TREEBASEDIR in UNIX Environments" (Integration Broker)

## Populated Record Types

TreeMover uses the following PeopleTools system tables for trees during both the tree import and tree export processes:

- PSTREEDEFN
- PSTREENODE
- PSTREELEAF
- PSTREESTRCT
- PSTREELEVEL
- PS\_TREE\_LEVEL\_TBL
- PS\_TREE\_NODE\_TBL

TreeMover also reads the PSSTATUS table during the tree export process to identify the version of the tree data exported.

## TreeMover File Formats

As delivered, TreeMover uses seven different file layouts. All the data for an exported tree is contained in a single file. Prior to a change in the file layout used for the export file, TreeMover writes a header record to the file to indicate what the next file layout is. The following table lists the standard file formats, along with their actual file layout name and the text of the header record that precedes a given layout data.

<b>File Layout</b>	<b>Description</b>	<b>Header Record Text</b>
TREE_VERSION	Contains the PeopleTools release number used to create the export data file. If a tree version is not provided, then the TreeMover import program assumes that the tree data is from a database before 8.1.	999TREE_VERSION
TREE_STRUCTURE	Used for data from the PSTREESTRCT table.	999TREE_STRCT
TREE_DEFN	Used for data from the PSTREEDEFN table.	999TREE_DEFN
TREE_USERLEVEL	Used for data from PS_TREE_LEVEL_TBL.	999TREE_USERLVL
TREE_LEVEL	Used for data from the PSTREELEVEL table.	999TREE_LEVEL
TREE_USERNODE	Used for data from PS_TREE_NODE_TBL.	999TREE_USERND
TREE_NODE	Used for data from the PSTREENODE and PSTREELEAF tables.	999TREE_NODE

The TreeMover export program processes the data in the order listed in the preceding table.

If you write your own export file, then you must adhere to the following rules:

- The Tree Structure record, if present, must always come first in the file.  
If it is not present, the TreeMover import program defaults to the record layouts used prior to release 8.1.
- The Tree Definition record, if present, must come after the Tree Structure record.
- The Tree Level records—only for trees with levels—must come before the Tree Node and Leaf records.
- The Tree Node and Leaf records are required for any export file.

- Prior to the change in the record layout, you must precede the next data record with the appropriate header record for that file format.

The TreeMover file formats and contents are:

- 999TREE\_VERSION  
Tree Version Data
- 999TREE\_STRCT  
Tree Structure Data
- 999TREE\_DEFN  
Tree Definition Data
- 999TREE\_USERLVL  
Tree Level Data 1  
Tree Level Data 2
- Tree Level Data N
- 999TREE\_LEVEL  
Tree Level 1  
Tree Level 2
- Tree Level N
- 999TREE\_USERND  
Tree Node Data 1  
Tree Node Data 2
- Tree Node Data N
- 999TREE\_NODE  
Tree Node 1  
Tree Node 2
- Tree Detail 1
- Tree Detail 2
- Tree Node 3
- Tree Node 4
- Tree Node N
- Tree Detail 5



- Tree Detail N

This is an example of TreeMover.

999TREE_VERSION	08.50-810.3	1			
999TREE_DEFN	2AQEDM1	NSNQEDMO	QE_PERS_DATA	1997-05-05QE_PERS_DATA	Personal Data Tree
			ASSR109		23
999TREE_USERLVL	3AQEDM1BRANCH	1997-05-05	ABRANCH	BRANCH	
	3AQEDM1COMPANY	1997-05-05	ACOMPANY	COMPANY	
	3AQEDM1CORPORATE	1997-05-05	ACORPORATE	CORPORATE	
	3AQEDM1DEPARTMENT	1997-05-05	ADEPARTMENT	DEPARTMENT	
	3AQEDM1DIVISION	1997-05-05	ADIVISION	DIVISION	
999TREE_LEVEL	4ACORPORATE	1	Y		
	4ACOMPANY	2	N		
	4ADIVISION	3	N		
	4ADEPARTMENT	4	N		
	4ABRANCH	5	N		
999TREE_NODE	6A00001			G1	
	6A		00001		8200
		N			8200
	6A		00001		8300
		N			8300

### TreeMover File Rules

TreeMover reads these records in the following strict order during an import:

1. PeopleTools Version (optional).  
This record is needed only if loading data from an 8.1 or later PeopleSoft database.
2. Tree Structure (optional).  
This record is needed only if the structures do not already exist. One or more structure records can be loaded.
3. Tree Definition (required).  
The information needed to create a tree. Only one tree definition record can exist in the input file.
4. Tree Level Data (optional).  
The detailed level data for a tree. One or more level data records can exist in the input file.
5. Tree Levels (required for leveled trees).  
The levels defined for the tree. Must include enough to define all the nodes. One or more level records can exist in the input file.
6. Tree Node Data (optional).  
The detailed tree node information: description, effective date, and so on.
7. Tree nodes and leaves (required).

Tree node and detail information. Each node must contain either a parent node or a previous sibling node. The referenced node—parent or sibling—must precede the node that references it in the input file.

Detail values for a tree must exist in the database before importing the tree.

One or more node records listed in level plus sibling order—that is, the root node on the first level, nodes on the second level, and so on—can exist in the input file.

## File Layout Details

Each record starts with a unique identifier for that record type, followed by the associated column data. All data is in a fixed format.

### Tree Structure Layout (TREE\_STRUCTURE)

For the Tree Structure layout, most column names map directly to the PSTREESTRCT record.

**Note:** The tree structure record is optional if the database already has the structure defined for the new tree.

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
<i>File Record ID</i>	Number	1	1	1	Always 1.
UPDATE_ ACTION	Character	1	2	2	Always A  (only add mode is supported at this time)
TREE_STRCT_ID	Character	18	3	20	None
DESCR	Character	30	21	50	None
TREE_STRCT_ TYPE	Character	1	51	51	None
DYNAMIC_ RANGE	Character	1	52	52	Y or N
SETCNTRL_IND	Character	1	53	53	S, B, U, or N
LEVEL_ RECNAME	Character	15	54	68	None

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
LEVEL_ PNLNAME	Character	18	69	86	None
LEVEL_ MENUNAME	Character	30	87	116	None
LEVEL_ BARNAME	Character	30	117	146	None
NODE_ RECNAME	Character	15	147	161	None
NODE_ PNLNAME	Character	18	162	179	None
NODE_ FIELDNAME	Character	18	180	197	None
SETCNTRLFLD	Character	18	198	215	None
NODE_ MENUNAME	Character	30	216	245	None
NODE_ BARNAME	Character	30	246	275	None
DTL_RECNAME	Character	15	276	290	None
DTL_ FIELDNAME	Character	18	291	308	None
DTL_PNLNAME	Character	18	309	326	None
DTL_ MENUNAME	Character	30	327	356	None
DTL_BARNAME	Character	30	357	386	None
DTL_SETID	Character	5	387	391	None

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
SETCNTRLVALUE	Character	20	392	411	None
DTL_TREE_NAME	Character	18	412	429	None
DTL_TREE_LEVEL_NUM	Character	5	430	434	None
LEVEL_PNLGRPNAME	Character	50	436	485	Only for release 8.1 and later.
NODE_PNLGRPNAME	Character	50	487	536	Only for release 8.1 and later.
DTL_PNLGRPNAME	Character	50	538	587	Only for release 8.1 and later.
LEVEL_ITEMNAME	Character	30	589	618	Only for release 8.1 and later.
NODE_ITEMNAME	Character	30	620	649	Only for release 8.1 and later.
DTL_ITEMNAME	Character	30	651	680	Only for release 8.1 and later.

### TreeMover Tree Definition Layout (TREE\_DEFN)

The tree definition record columns require either a tree structure defined in the database or a previous tree structure record in the file. For the Tree Definition layout, most column names map directly to the PSTREEDEFN record.

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
<i>File Record ID</i>	Number	1	1	1	Always 2.
UPDATE_ACTION	Character	1	2	2	Always A (only add is mode supported at this time).

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
SETID	Character	5	3	7	None
SETCNTRLVALUE	Character	20	8	27	None
TREE_NAME	Character	18	28	45	None
EFFDT	Date	10	46	55	YYYY-MM-DD format.
TREE_STRCT_ID	Character	18	56	73	None
DESCR	Character	30	74	103	None
NODE_COUNT	Character	10	104	113	None
ALL_VALUES	Character	1	114	114	Y or N
USE_LEVELS	Character	1	115	115	S, L, or N
DUPLICATE_LEAF	Character	1	116	116	Y or N
TREE_CATEGORY	Character	18	117	134	None
EFF_STATUS	Character	1	135	135	None
TREE_ACC_METHOD	Character	1	136	136	None
TREE_ACC_SELECTOR	Character	1	137	137	None
TREE_ACC_SEL_OPT	Character	1	138	138	None
LEAF_COUNT	Character	10	139	148	None

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
TREE_IMAGE	Character	30	139	168	Only for release 8.1 and later.
BRANCH_IMAGE	Character	30	170	199	Only for release 8.1 and later.
NODECOL_IMAGE	Character	30	201	230	Only for release 8.1 and later.
NODEEXP_IMAGE	Character	30	232	261	Only for release 8.1 and later.
LEAF_IMAGE	Character	30	263	292	Only for release 8.1 and later.

### Tree User Level Data Layout (TREE\_USERLEVEL)

The columns in this layout correspond to the columns in the TREE\_LEVEL\_TBL record.

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
File Record ID	Number	1	1	1	Always 3.
UPDATE_ACTION	Character	1	2	2	Always <i>A</i> (only add mode is supported at this time).
SETID	Character	5	3	7	None
TREE_LEVEL	Character	10	8	17	None
EFFDT	Date	10	18	27	YYYY-MM-DD format.
EFF_STATUS	Character	1	28	28	None
DESCR	Character	30	29	58	None

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
DESCRSHORT	Character	10	59	68	None

### Tree Level Record Layout (TREE\_LEVEL)

The tree level layout requires a tree definition record in the file previous to this record type. The columns in this layout correspond to the columns in the PSTREELEVEL record.

**Note:** No-level records should be defined for no-level trees.

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
File Record ID	Number	1	1	1	Always 4.
UPDATE_ACTION	Character	1	2	2	Always A (only add mode is supported at this time).
TREE_LEVEL	Character	10	3	12	None
TREE_LEVEL_NUM	Character	3	13	15	None
ALL_VALUES	Character	1	16	16	Y or N

### Tree Node Data Layout (TREE\_USERNODE)

The columns in this layout correspond to the columns in the TREE\_NODE\_TBL record.

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
File Record ID	Number	1	1	1	Always 5.
UPDATE_ACTION	Character	1	2	2	Always A (only add mode is supported at this time).
SETID	Character	5	3	7	None

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
TREE_NODE	Character	20	8	27	None
EFFDT	Date	10	28	37	YYYY-MM-DD format.
EFF_STATUS	Character	1	38	38	None
DESCR	Character	30	39	68	None

### Tree Node Record Columns (TREE\_NODE)

Tree node record columns require a tree definition record in the file previous to this record type and level records if the tree has levels. Node records must have parents defined before their children. Detail records can be interspersed between node records.

---

**Note:** Node type is either *G* or *R*. *G* is for standard nodes, and *R* is for Query Access Group record nodes. Branch nodes are not supported at this time.

---

<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
File Record ID	Number	1	1	1	Always 6.
UPDATE_ACTION	Character	1	2	2	Always <i>A</i> (only add mode is supported at this time).
TREE_NODE	Character	20	3	22	Only for node records.
PARENT_NODE_NAME	Character	20	23	42	Tree TREE_NODE for the parent node of the node or detail.
TREE_NODE_TYPE	Character	1	43	43	Only for node records; must be <i>G</i> or <i>R</i> .



<b>Column Name</b>	<b>Column Type</b>	<b>Length</b>	<b>Start Position</b>	<b>End Position</b>	<b>Comments</b>
TREE_LEVEL_NUM	Character	3	44	46	Only for node records.
TREE_NODE_PREV_SIB	Character	20	47	66	Only for node records.
RANGE_FROM	Character	30	67	96	Only for detail records.
RANGE_TO	Character	30	97	126	Only for detail records.
DYNAMIC_RANGE	Character	1	127	127	Only for detail records; must be <i>Y</i> or <i>N</i> .
LEAF_IMAGE	Character	30	129	158	Only for release 8.1 and later.
NODECOL_IMAGE	Character	8	160	167	Only for release 8.1 and later.
NODEEXP_IMAGE	Character	8	169	176	Only for release 8.1 and later.

---

## Importing and Exporting PeopleSoft 8 Trees

This topic provides an overview of using TreeMover with PeopleSoft 8 databases and discusses how to import and export PeopleSoft 8 trees.

### Understanding TreeMover and PeopleSoft 8.x Trees

As with other PeopleSoft Application Engine processes, you initiate the TreeMover process from PeopleSoft pages. You need to submit a few required parameters at runtime, including the file name for each tree import (load) or tree export (unload). You can run TreeMover each time you need to load a tree, or you can set PeopleSoft Process Scheduler to run a tree load process automatically.

To view the results of TreeMover processes, perform the following steps from the Tree Import or Tree Export page:

1. Click the **Process Monitor** link.

The Process List page appears. The run status for your process will appear as *Success*, *No Success*, or *Warning*.

---

**Note:** If you receive a *No Success* or *Warning* status, you should also review the TreeMover log file. This file may include additional information that the Process Monitor does not include.

---

2. Click the **Details** link.

The Process Detail page appears.

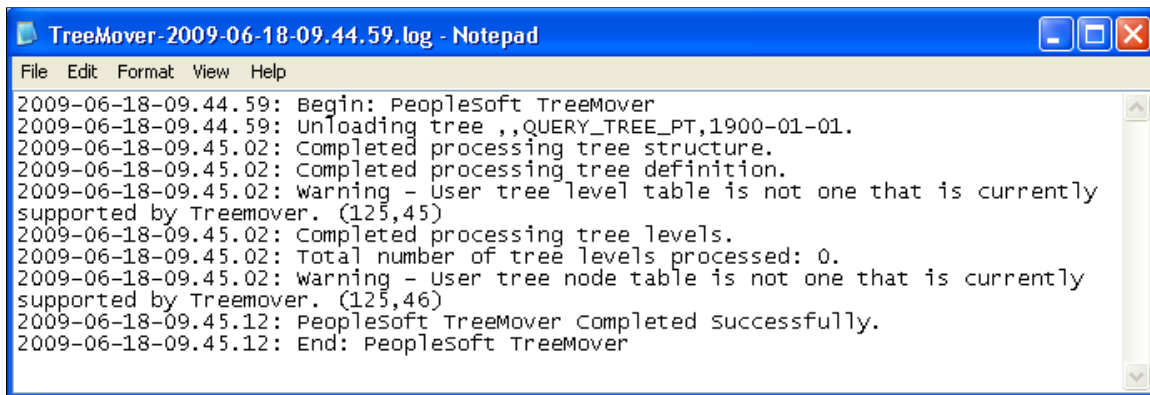
3. Click the **Message Log** button.
4. Click the **Explain** button for further details on each message.

You can also view the log output file. To find this file, navigate to the `log_output` directory. The location of the `log_output` directory is specified in the Process Scheduler configuration file. After you are accessed the `log_output` directory, navigate to the following path: `/AE_TREEMOVER_<PROCESS_ID>/TreeMover-<Date-Time>.log`.

This example shows the full path to the log output file – the italicized portion of the path is specified in the Process Scheduler configuration file:

```
C:\Documents and Settings\admin\psft\pt\8.xx-xxx-xx\appserv\prcs\QEDMO\log_output
\AE_TREEMOVER_59\TreeMover-YYYY-MM-DD-09.44.59.log
```

This example shows the TreeMover log file.



```
TreeMover-2009-06-18-09.44.59.log - Notepad
File Edit Format View Help
2009-06-18-09.44.59: Begin: Peoplesoft TreeMover
2009-06-18-09.44.59: Unloading tree ,,QUERY_TREE_PT,1900-01-01.
2009-06-18-09.45.02: Completed processing tree structure.
2009-06-18-09.45.02: Completed processing tree definition.
2009-06-18-09.45.02: warning - User tree level table is not one that is currently
supported by Treemover. (125,45)
2009-06-18-09.45.02: Completed processing tree levels.
2009-06-18-09.45.02: Total number of tree levels processed: 0.
2009-06-18-09.45.02: warning - User tree node table is not one that is currently
supported by Treemover. (125,46)
2009-06-18-09.45.12: Peoplesoft TreeMover completed successfully.
2009-06-18-09.45.12: End: Peoplesoft TreeMover
```

The delivered TreeMover application can move only tree node data that is associated with the `PS_TREE_NODE_TBL` and only tree level data that is associated with the `PS_TREE_LEVEL_TBL`. You can modify TreeMover to support other tables for node and level data.

---

**Note:** Creating TreeMover customization for moving non-standard node and detail user data is a complicated process. Oracle recommends using PeopleSoft Data Mover or other database tool when you move user data from a source database to a target database.

---

When a tree replaces an existing tree using the Tree Import Utility, the system import a new tree using a unique name and check if the tree creation process is successful. If the tree creation process is successful, the system delete the existing tree and rename the newly created tree. If the import file from which you are importing is corrupted, you don't lose your existing tree.

Also, if the existing tree was secured by Definition Security, it is automatically removed from the Definition Security Group at the time of deletion. Because the removal of the tree from the Definition Security Group occurs prior to the import, the utility has no knowledge of the tree being secured, and therefore, the new tree will have to be manually secured after the import is complete.

## Related Links

[Customizing TreeMover for Additional Node and Level Data Records](#)

## Prerequisite for Importing and Exporting PeopleSoft 8 Trees to an External File

Before you import or export a tree, you must set the PS\_TREEBASEDIR environment variable. See "Setting PS\_FILEDIR, PS\_SERVDIR and PS\_TREEBASEDIR in Microsoft Windows Environments" (Integration Broker) and "Setting PS\_FILEDIR, PS\_SERVDIR, and PS\_TREEBASEDIR in UNIX Environments" (Integration Broker).

---

**Note:** If PS\_TREEBASEDIR is not set, an error message will be displayed saying *Environment variable PS\_TREEBASEDIR, needed to qualify a file name, is not set.*

---

## Exporting PeopleSoft 8 Trees to an External File

Use the Tree Export page (RUN\_TREEMOVER\_EXP) to export trees using TreeMover.

Navigation:

**Tree Manager > Tree Utilities > Export Trees**

This example illustrates the fields and controls on the Tree Export page.

The screenshot shows the 'Tree Export' page with the following fields and controls:

- Run Control ID:** TreeExport
- Report Manager** and **Process Monitor** links, and a **Run** button.
- \*Output File Name:** TreeExport
- Tree Definition** section:
  - Tree Name:** QUERY\_TREE\_WF
  - Effective Date:** 01/01/1900
  - SetId:** QEDM1
- Tree Data to Export** section:
  - Tree Definition
  - Tree Level
  - Tree Structure
  - Tree Node/Leaf
  - Tree User Level
  - Tree User Nodes

To export a tree to an external file:

1. In the Tree Export page, enter the correct output file name.

---

**Note:** When the PS\_TREEBASEDIR environment variable is set, the flat file for the export process is located in %PS\_TREEBASEDIR%\<USER>\OutputFilename. You can override this and create another location using the Process Definition Override page.

---

2. Enter the tree name, effective date, and tree key value.

---

**Note:** The tree key value applies to only setID, business unit, or user-defined key trees (tree key type is set in the tree structure). For trees that have no additional key value, the field is not available. The default encoding used to export trees is UTF-8.

---

3. Select the tree data to export.

You can export the tree structure data, the tree definition, the tree levels, the tree level data, the tree nodes and leaves, and the tree node data. You also can export the tree definition, tree level, and tree node/leaf data.

---

**Note:** You need to select **Tree Structure** if the tree structure does not already exist in the target database. You can also select the **Tree User Level** option to move related data from the PS\_TREE\_LEVEL\_TBL table, and select the **Tree User Nodes** option to move related data from the PS\_TREE\_NODE\_TBL.

---

4. Click the **Run** button to move the tree. This will export the specified tree as a flat file in the location %PS\_TREEBASEDIR%\<USER>\OutputFilename.

If PS\_TREEBASEDIR is set as E:\buildArea\TREE\_LOC and the user is QEDMO, the file will be exported as E:\buildArea\TREE\_LOC\QEDMO\ test\_t01.

5. Verify that the settings on the Process Scheduler Request page are correct, and click **OK** to run the process.
6. Check the run status in the Process Monitor.

If an Error or Warning status exists for the process, check the TreeMover log file which may contain additional information that describes the problem. Potential problems are not limited to – but may include – the following:

- You tried to export tree level data and the tree has no levels.
- You tried to export tree user level data and the tree does not use the PS\_TREE\_LEVEL\_TBL for level data.
- You tried to export tree user node data and the tree does not use the PS\_TREE\_NODE\_TBL.

## Related Links

"Understanding Setting PS\_FILEDIR, PS\_SERVDIR, and PS\_TREEBASEDIR Environment Variables" (Integration Broker)

"Setting PS\_FILEDIR, PS\_SERVDIR and PS\_TREEBASEDIR in Microsoft Windows Environments" (Integration Broker)

"Setting PS\_FILEDIR, PS\_SERVDIR, and PS\_TREEBASEDIR in UNIX Environments" (Integration Broker)

## Importing PeopleSoft 8 Trees from an External File

Use the Tree Import page (RUN\_TREEMOVER\_IMP) to import trees using TreeMover.

Navigation:

**Tree Manager > Tree Utilities > Import Trees**

**Note:** PeopleSoft Tree Manager does not accept wildcard characters. To prevent creating a corrupted tree, the Tree Import utility checks for invalid tree node names.

This example illustrates the fields and controls on the Tree Import page.

To import an existing PeopleSoft tree:

1. In the Tree Import page, enter the correct input file name.

**Note:** When the PS\_TREEBASEDIR environment variable is set, the flat file for the import process is located in %PS\_TREEBASEDIR%\<USER>\InputFilename. You can override this and create another location using the Process Definition Override page.

2. Select a save method.

By default, you should use the **Save** option. However, if you think the tree might not pass all the PeopleSoft tree audits, then select the **Save Draft** option, which saves the tree in draft mode and functions just as it does in PeopleSoft Tree Manager.

3. If the tree already exists in your database, select the **Replace Tree if Exists** option.

**Note:** If the tree already exists in your database and you do not select the **Replace Tree if Exists** option, the tree will not be imported.

4. Select the **Load Tree Defn from File (load tree definition from file)** option if the tree definition is contained in the input file and you want to load the tree with the same tree definition values.

---

**Note:** In most cases, you want to load the tree definition from the file. If you select this option and the tree definition *does not* exist in the input file, then the load process fails.

---

5. Enter the basic tree information if you are not loading the tree definition from the input file.

If you are not loading the tree definition from the input file, then you are required to specify all the basic tree information on the run control page. These fields correspond to the same values that you'd have to enter if you were creating the tree using PeopleSoft Tree Manager. TreeMover skips the input record that contains the tree definition information and instead use the values that you enter.

You must load the tree definition from the file if you're also loading the tree structure from the file. If you try to load the structure from the file, but have overridden the definition values on the page, then the process will not run completely.

TreeMover loads a new tree structure only if the structure doesn't already exist.

---

**Note:** If your TreeMover data file contains user level data or user node data and you are changing the setID of your tree on import, the user data will retain the original setID. TreeMover import does not support the changing of user data setIDs.

---

6. Select the encoding option. The available options are *ANSI* and *UTF-8*.
7. Click the **Run** button to move the tree. This will import the flat file in the location %PS\_TREEBASEDIR%\<USER>\InputFilename.

If PS\_TREEBASEDIR is set as E:\buildArea\TREE\_LOC and user is QEDMO, the file will be imported from E:\buildArea\TREE\_LOC\QEDMO\ test\_t01.

8. Verify the successful completion of the process by checking the run status of the process in the Process Monitor page.

If you receive either a run status of *Warning* or *No Success*, view the message log explanations for details and recommendations. You should also view the TreeMover log for more information.

---

**Note:** You can also check the log file. If the process completed successfully, the log file states *PeopleSoft TreeMover Completed Successfully*.

If you're loading a tree that contains detail values, then those detail values must exist in the target database before you load the tree. If they do not exist, then the tree import process fails.

---

## Related Links

"Understanding Setting PS\_FILEDIR, PS\_SERVDIR, and PS\_TREEBASEDIR Environment Variables" (Integration Broker)

"Setting PS\_FILEDIR, PS\_SERVDIR and PS\_TREEBASEDIR in Microsoft Windows Environments" (Integration Broker)

"Setting PS\_FILEDIR, PS\_SERVDIR, and PS\_TREEBASEDIR in UNIX Environments" (Integration Broker)

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## Importing and Exporting PeopleSoft 7.x Trees

This topic provides an overview of the TMDOWNLD SQR program and discusses how to install and run SQR program.

### Understanding the TMDOWNLD SQR Program

TreeMover provides the TMDOWNLD SQR program for unloading a PeopleSoft tree from a PeopleSoft 7 or 7.5 database. (The SQR should also work against a PeopleSoft 6 database, but it has not been tested against that version and is not certified for it.) This program exports most of the same tree information as the Tree Export functionality provided with PeopleTools 8. Differences include:

- Tree categories are not exported; the category defaults to DEFAULT.
- Tree performance options are not exported.
- Tree structures are not exported.

### Installing the SQR Program

To install the TMDOWNLD SQR program, copy the TMDOWNLD.SQR file from your PeopleTools 8 PS\_HOME/SQR directory to the SQR directory for your PeopleTools 7 or 7.5 install.

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**Note:** If you do not have a copy of TMDOWNLD.SQR, contact PeopleSoft Customer Service.

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When you run this SQR against a given version of a PeopleSoft database, you must run it with the common SQC files that are delivered for that PeopleTools version. For example, if you run it against a PeopleSoft 7 database, you should run it so that it uses the SQC files delivered with PeopleTools 7. Otherwise, the process will not run correctly.

### Running the SQR Program

To run the TMDOWNLD SQR program:

1. Run the TMDOWNLD SQR program from the SQR command line.
2. Follow the system prompts.

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**Note:** There is no associated run control page with this SQR for PeopleSoft 7 or 7.5 databases. In order to schedule this process to run without manual intervention, you need to create a run control for the process. See your PeopleTools manual for more information on creating run controls.

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### Related Links

"SQR for PeopleSoft Overview" (SQR for PeopleSoft Developers)

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## Customizing TreeMover for Additional Node and Level Data Records

This topic discusses how to customize TreeMover for additional node and level data records.

The TreeMover program only moves data in the standard PeopleSoft tree tables. PeopleSoft trees generally have application node data stored in the PS\_TREE\_NODE\_TBL table and application level data stored in the PS\_TREE\_LEVEL\_TBL table.

However, the tables used to hold the application data for the detail values, such as leaves, are always application-specific; there are no default tables for storing that application data. For example, you might have trees that reference employees as leaf values, and the employee information is stored in the PERSONAL\_DATA\_TBL table. TreeMover does not handle moving data from application tables. Generally, when you move trees between different PeopleSoft databases, you should move the application data using other means, such as with DataMover. However, you can also customize the TreeMover program to copy other application data. As with any PeopleSoft application, you should avoid performing any customizations whenever possible.

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**Note:** Creating TreeMover customization for moving non-standard node and detail user data is a complicated process. Oracle recommends using PeopleSoft Data Mover or other database tool when you move user data from a source database to a target database.

Before customizing TreeMover, you should consider the tables for which you intend to add support. Application tables that hold data used by other parts of the PeopleSoft system should be moved by other means, such as DataMover.

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### Modifying the TreeMover Application Engine Program

The TreeMover process is a PeopleSoft Application Engine process called TREEMOVER. To add support for additional node and level tables, you must perform two basic steps: create the file layout to be used for the new data and modify the TREEMOVER\_AET PeopleCode according to the following steps.

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**Note:** You should *not* need to make any modifications to the actual Application Engine code.

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To modify the TreeMover Application Engine program:

1. Create file layouts for your desired tree node data record or tree level data record using Application Designer file layout functionality.

Use one of the existing TreeMover file layouts as an example (TREE\_DEFN, TREE\_NODE, and so on). Each file layout you add for TreeMover must have a unique file record ID, which is specified as part of the file layout record properties; the existing TreeMover file layouts use numbers 1 through 6.

Each file layout you add must also have the UPDATE\_ACTION field.

2. In the TREEMOVER\_AET record, modify the PROCESS\_INSTANCE FieldFormula PeopleCode as follows:
  - In the isValidUserNodeRec function, add your desired PeopleSoft records for node data to the condition check.



- In the `isValidUserLevelRec` function, add your desired PeopleSoft records for level data to the condition check.
- In the `setUserNodeRecLayout` function, add code to set the correct file layout based on the node data record.
- In the `setUserLevelRecLayout` function, add code to set the correct file layout based on the level data record.
- In the `getUserNodeData` function, add code to get data from your new node records.
- In the `getUserLevelData` function, add code to get data from your new level records.

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**Note:** In the previous steps, do *not* modify the original code in the functions. You should add new code only within new “if” conditions. If you change any of the existing code, trees based on the `PS_TREE_LEVEL_TBL` and `PS_TREE_NODE_TBL` will no longer be handled with TreeMover.

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## Modifying the TreeMover SQR Program

If you have modified the TREEMOVER Application Engine program, then you also need to make similar changes to the TMDOWNLD.SQR, assuming you’re using that SQR to download trees from a PeopleSoft 7.x database.

To modify the TMDOWNLD SQR program:

1. Change the Download-TreeUserLevel procedure to handle the new tree level data tables.

Be sure to add conditional logic so that the existing logic is still executed when the tree structure uses `PS_TREE_LEVEL_TBL`. The tree level record name is stored in the variable `&TS.LEVEL_RECNAME`.

2. Change the Download-TreeUserNode procedure to handle the new tree node data tables.

Be sure to add conditional logic so that the existing logic is still executed when the tree structure uses `PS_TREE_NODE_TBL`. The tree node record name is stored in the variable `&TS.NODE_RECNAME`.



## Chapter 8

# Setting Multinavigation Paths

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## Using Multinavigation Paths

When you define tree structure, you also define the menu, menu bar, and default navigation pages for nodes and details. With multinavigation, you can navigate to any of the components and pages that belong to the menu bar specified on the tree structure. For example, using the Personal Data tree, you could navigate to pages such as Personal Data, Benefits, or Salary Information.

When multinavigation is enabled on the structure of the tree, you can click the **Navigation Options** link in PeopleSoft Tree Manager and select the component to be invoked when editing data on a node or detail value.

Navigation:

**Tree Manager > Tree Manager > Navigation Options**

This example illustrates the fields and controls on the Detail Navigation page.

**Detail Navigation Page**

This Page allows User to set a Page to be accessible via "Edit Data" Action Image.

Navigation Links		
Customize   Find   View All   First 1-25 of 39 Last		
Current	Component	Page
	Procurement Control	<a href="#">GL Templates</a>
	Treasury Options	<a href="#">Treasury Options</a>
	Purchasing Definition	<a href="#">Req Approval Options</a>
	Payables Definition	<a href="#">Matching</a>
	Receivables Definition	<a href="#">Bank/Payment Options</a>
	Order Management Definition	<a href="#">General Holds 2</a>
	Project Costing Options	<a href="#">Microsoft Project</a>
	Project Costing Definition	<a href="#">BU Definition</a>
	Program Management Options	<a href="#">Program Management Options</a>
	Receivables Definition	<a href="#">Accounting Options 2</a>
	Order Management Definition	<a href="#">Accounting and Billing</a>
	Order Management Definition	<a href="#">Taxes and Currency</a>
	Order Management Definition	<a href="#">Order Entry Features</a>
	Project Costing Options	<a href="#">Delete Utility Tables</a>
	Project Costing Options	<a href="#">Project Costing Options</a>
	Purchasing Definition	<a href="#">PO Approval Options</a>
	Service Procurement Definition	<a href="#">Services Procurement Bus Unit</a>
	Order Management Definition	<a href="#">General Holds 1</a>
	Promotions Mgmt. Definition	<a href="#">Promotions Definition</a>
	Project Costing Options	<a href="#">Budget Row Versioning</a>
	Project Costing Options	<a href="#">Copy Template Option 1</a>
	Payables Definition	<a href="#">Payments</a>
	Order Management Definition	<a href="#">Credit Processing</a>
	Contracts BU	<a href="#">Confidence Level Setup</a>
	Project Costing Options	<a href="#">Budget Alerts</a>

**Note:** User navigation selections are valid only while the current tree is open. After the tree has been closed and reopened again, the default navigation is restored.

## Enabling Multinavigation

Two tree structure fields determine if multinavigation is available for nodes and details. These fields let the tree developer select whether multiple navigation targets should be supported when accessing node or detail data. By default, multinavigation is not enabled.

Navigation:

Access the Tree Structure Properties page (PSTREESTRUCTDEFN) by selecting **Tree Manager > Tree Structure**

This example illustrates the fields and controls on the Tree Structure Properties page.

The screenshot shows the 'Tree Structure Properties' page with the following details:

- Tabs: Structure (selected), Levels, Nodes, Details
- Structure ID: QE\_PERS\_DATA
- \*Description: Personal Data
- \*Type: Detail
- Additional Key Field**
  - SetId Indirection
  - Business Unit
  - User Defined
  - None
- Navigation Options**
  - Node Multi-Navigation
  - Detail Multi-Navigation

Navigation options are hidden when the structure type is *Summary*.

## Creating Multinavigation Menus

We recommend that you create special menus to be used for multinavigation. These menus should be specific to the nodes or details and should not contain any extra visible components.

Pages that you want to display on the Detail Navigation page should use the Menu and Bar items defined in the tree structure.

To prevent these special menus from being used for something other than tree navigation purposes, clear the **Menu Installed** option on the Menu Properties dialog box in PeopleSoft Application Designer.

If the tree structure has been defined with multinavigation flags enabled, you can select the component and page to open when editing the node or leaf data.

While populating the Detail Navigation page, PeopleSoft Tree Manager collects pages using this logic: pages appear in the Navigation Links section belong to the components that have the same key fields in their search records. There are two exceptions from this logic:

- EFFDT key field is ignored during the validation.
- The menu item, which points to the underlined component, can overwrite the component search record.

In this case, the previous logic is applied to the overwriting search record.

### Related Links

[Using Navigation Options](#)



# Configuring PeopleSoft Tree Manager on the Web

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## Using PeopleSoft Tree Manager Upgrade Programs

PeopleSoft Tree Manager was developed using standard PeopleSoft Pure Internet Architecture. For example, it was developed using pages, components, and standard PeopleCode functionality. Because of this, additional steps are required for configuring new and existing trees that will be accessed through the web.

Application Engine upgrade programs, UPG8RPTG and UPG81RPTG, automatically perform many of the steps that are required to configure your existing trees so that they can be viewed from a web browser.

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**Note:** When upgrading from any 7.x release, you will be instructed during the upgrade process to run the UPG8RPTG program. When upgrading from an 8.0x release, you will be instructed to run the UPG81RPTG program. You can rerun the UPG81RPTG program as often as required to complete the upgrade of PeopleSoft Tree Manager structures. You should run the UPG8RPTG program once as directed by the upgrade process.

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To run the UPG8RPTG and UPG81RPTG programs:

1. Select **PeopleTools > Application Engine > Submit AE Process Requests**.
2. Create a new Application Engine process request run control ID.  
The Application Engine Request page appears.
3. Click the **Run** button to send the request to the Process Scheduler.  
The Process Scheduler page appears.
4. Select an application server to run the program from, and then select the UPG8RPTG or UPG81RPTG program from the list of processes displayed.
5. Click the **OK** button on the Process Scheduler Request page to start the Application Engine program.
6. Select **PeopleTools > Process Scheduler > Process Monitor** to monitor the status of the UPG8RPTG or UPG81RPTG process.  
The process should only take a couple of minutes to run to completion.
7. From the Process Monitor page, find the UPG8RPTG or UPG81RPTG process that you initiated, and select the **Details** link from the process list.
8. Click the **Message Log** button to view any messages associated with the program.

You might encounter two messages with the UPG8RPTG and UPG81RPTG programs:

- A page on a tree structure was not found on a component.
- A tree structure referenced a page that was part of a component, but the component was not found on a menu.

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**Note:** If you receive either of these messages, you need to use the manual configuration steps to upgrade these tree structures to be usable from the web. You can use the **View All** option to display all messages generated by the UPG8RPTG or UPG81RPTG programs and then use your browser's print functionality to print out the messages.

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## Completing Manual Configuration Steps

You may need to perform manual configuration steps for trees that used application-specific pages to add or update nodes, levels, or detail values in the tree. No additional configuration steps should be required for trees that use only the standard PeopleSoft Tree Manager pages and tables.

The Windows-based PeopleSoft Tree Manager had the ability to invoke virtually any application-specific page by just knowing the name of the page to be invoked. It did not require that the component and complete menu path be specified on the Tree Structure record. Neither did it use standard security edits or permission lists for determining if the user should have access to a component. It was quite common, in prior releases, for the tree structure to only specify the page and possibly the component to be used. The menu information was usually left blank.

The web-based PeopleSoft Tree Manager uses standard PeopleCode functions to display the application pages used for maintaining the node, level, and detail values. These functions require that:

- The complete menu path is provided.
- Users have security access to work with the pages.

For tree structures that did not fully specify menu paths and security access, the upgrade programs attempt to complete the information by searching existing menus and components to find a valid and complete menu path for node, level, and detail user data pages. However, there might be cases where existing trees use application pages that are not part of a component, or the component was not part of a PeopleSoft menu definition.

To add or update the nodes, levels, and detail values for the web-based PeopleSoft Tree Manager, you have to configure the tree structure records so that all of the page, component, and menu information is correctly specified. The UPG8RPTG and UPG81RPTG programs complete the component information for all of the application pages that are part of a component. They also complete the menu path information for all components that are defined on at least one PeopleSoft menu definition.

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**Note:** The Process Scheduler messages that were generated by the UPG8RPTG and UPG81RPTG programs tell you the pages that are not part of any component, or components that are not part of a PeopleSoft menu definition. After you have created component definitions for all of these pages, you need to rerun only the UPG81RPTG program to update the tree structure records with the new information.

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## Enabling Security Access for Application Pages

The web-based PeopleSoft Tree Manager uses standard PeopleSoft security and permission lists to control which users should have access to the application pages and what types of actions they should be able to perform.

You need to verify the following:

- All of the application pages that are used by PeopleSoft Tree Manager for maintaining the nodes, levels, and detail values are part of a component.
- The component must be defined on a menu definition to which the user has been granted access.
- Users have specific access to any of the actions, such as Add, Update, and Correction.

**Note:** The Windows-based PeopleSoft Tree Manager did not use standard PeopleSoft security checks, so existing pages that were accessed from the Windows-based PeopleSoft Tree Manager may not be set up correctly.

## Updating Effective-Dated Application Pages

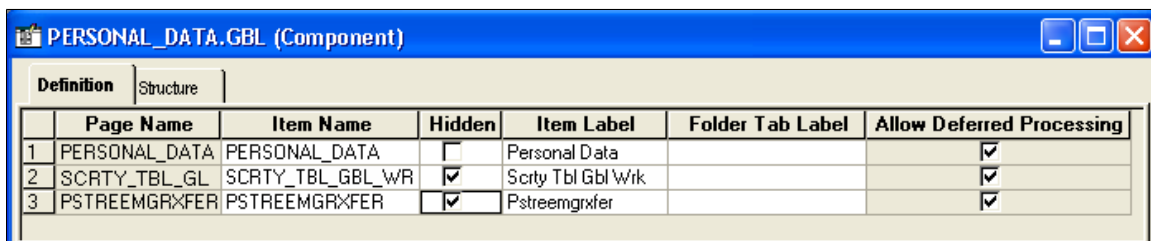
If the application pages used to maintain node, level, or detail value tables are effective-dated, the Windows-based PeopleSoft Tree Manager had special coding to ensure that when you added a new value, the default effective date was the effective date of the tree. When a tree was saved, the Windows-based PeopleSoft Tree Manager checked the effective date of the newly added node, level, or detail value and issued a warning if it was greater than the tree's effective date.

In order to implement tree-specific effective date processing from the web-based PeopleSoft Tree Manager, a PeopleTools-provided work page – PSTREEMGRXFER – needs to be added to any component that updates effective-dated application tables. This work page contains logic that:

- Automatically sets the default effective-date as the effective date of the tree.
- Compares the effective date of the user data to the effective date of the tree during SaveEdit processing.

This new work page has already been added to the default components used to maintain the TREE\_NODE\_TBL and TREE\_LEVEL\_TBL, so only those trees that use effective-dated application pages for maintaining the node, level, or detail values need to be updated.

This illustration shows the PERSONAL\_DATA1 component updated to include the new PSTREEMGRXFER work page. Notice that the new work page is marked as a hidden page.



	Page Name	Item Name	Hidden	Item Label	Folder Tab Label	Allow Deferred Processing
1	PERSONAL_DATA	PERSONAL_DATA	<input type="checkbox"/>	Personal Data		<input checked="" type="checkbox"/>
2	SCRTY_TBL_GL	SCRTY_TBL_GBL_WR	<input checked="" type="checkbox"/>	ScrtY Tbl Gbl Wrk		<input checked="" type="checkbox"/>
3	PSTREEMGRXFER	PSTREEMGRXFER	<input checked="" type="checkbox"/>	Pstreemgrxfer		<input checked="" type="checkbox"/>

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**Note:** In the previous example, the SCRTY\_TBL\_BGL\_WRK page was already part of this component and is used for other non-tree related purposes.

This configuration step is optional. However, remember that users of the Windows-based PeopleSoft Tree Manager are used to having the effective date of the application data automatically set to the tree's effective date. Therefore, in order to provide consistent functionality, you should consider adding the new PSTREEMGRXFER page to your effective-dated components.

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## Customizing TREE\_NODE/TREE\_LEVEL Pages

The Windows-based PeopleSoft Tree Manager provided standard pages and components for maintaining the TREE\_NODE\_TBL and TREE\_LEVEL\_TBL tables, such as the default tables that are used for the node and level data. If you have customized either of these pages or components, you should apply the same customizations to the versions that are used specifically by the web-based PeopleSoft Tree Manager.

The web-based PeopleSoft Tree Manager uses the following pages and components for maintaining data in the TREE\_NODE\_TBL and the TREE\_LEVEL\_TBL tables:

- Node Components(Page):

```
TREE_NODE_PeopleSoft Internet Architecture(TREE_NODE_PIA)TREE_NODE_PIA_2  
(TREE_NODE_PIA_2)
```

- Level Components(Page):

```
TREE_LEVEL_PIA(TREE_LEVEL_PIA)TREE_LEVEL_PIA_2(TREE_LEVEL_PIA_2)
```