

ProAdmin version 3.10 introduces formatted output, hyperlinks and eligibility exhibits in Detailed Results, Repository File Maintenance improvements, Late Retirement component enhancements, new payment form options, and many other features listed below.

### Interface

- ◆ **Formatted output.** Detailed and Output Definition Results are now formatted to make them more visually appealing and easier to read.


Tables feature **automatic freezing of column headings** when scrolling:

Date	Member Age	Benefit Service	Cumulative Accrual Rate	Accrual Basis	Benefit Component
12/31/2003	39y 7m	14.500000	0.290000	17,416.67	5,050.83
12/31/2004	40y 7m	15.500000	0.310000	18,263.89	5,661.81
12/31/2005	41y 7m	16.500000	0.330000	20,151.39	6,649.96
12/31/2006	42y 7m	17.500000	0.350000	22,302.78	7,805.97
12/31/2007	43y 7m	18.500000	0.370000	31,094.44	11,504.94
12/31/2008	44y 7m	19.500000	0.390000	31,900.00	12,441.00
12/31/2009	45y 7m	20.500000	0.410000	32,361.17	13,268.08
12/31/2010	46y 7m	21.500000	0.430000	32,403.10	13,933.33

Also, **copy and paste** (using Ctrl+C) preserves formatting and lets you paste multiple values into Excel without the need to parse text into columns. (Note that the Copy button, which copies the entire report to the clipboard, remains unchanged and does not include formatting.)

- ◆ **Hyperlinks in detailed results.** Links now appear in column headings of many sample life reports (e.g., components in a benefit formula), to let you instantly drill down for more detail without having to find the report in the tree.

Date	Member Age	Benefit Service	Cumulative Accrual Rate	Accrual Basis	Benefit Component
12/31/1999	36y 3m	0.000000	0.000000	0.00	0.00
12/31/2000	37y 3m	11.500000	0.230000	0.00	0.00
12/31/2001	38y 3m	12.000000	0.240000	39,417.13	9,460.11
12/31/2002	39y 3m	13.000000	0.260000	40,534.23	10,538.90
12/31/2003	40y 3m	14.000000	0.280000	39,945.71	11,184.80

The back (and forward) button  lets you easily get back to reports you visited, e.g., before clicking a link.

## Repository File Maintenance

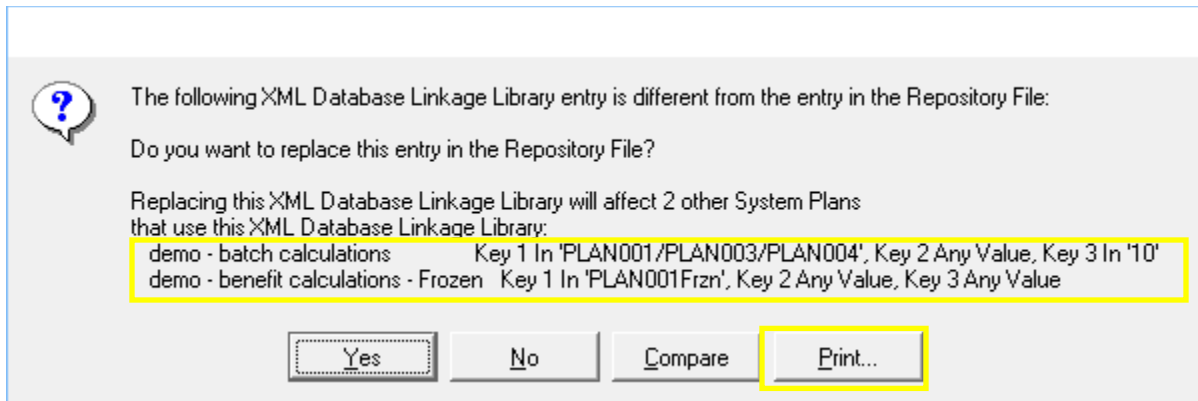
- ◆ **Better information.** The repository maintenance summary view of a System Plan now includes the XML Output Linkage. The details view has been enhanced to present all library entries in alphabetical order by and within libraries, as well as to include the date last modified and any Notes for each library entry.
- ◆ **Detailed comparison.** When adding (replacing) or updating a System Plan, provide a detailed comparison of the existing repository libraries to the current client file libraries. Also, when not in batch mode (i.e., when using the Add a System Plan option rather than the Update System plans option), allow the user to continue or cancel after viewing the differences for a system plan. Note that canceling would only apply to the system plan currently being processed; if cancel is selected, ProAdmin moves on to attempt to process the next System Plan being added.



The report of the comparison includes three sections: (1) a summary of the differences between the two sets of client files, (2) a detailed listing of the names of each library entry with an annotation to the left, consistent with the summary, if that library entry was removed, renamed, changed or added, and (3) a complete listing of the changes for each library item that is known to have changed.

- ◆ All repository listings are now sorted by library name and entity name. This includes the XML Database Linkage Library and the XML Output Linkage Library which were previously shown first.
- ◆ **Processing order.** When more than one System Plan is chosen, the System Plans are processed in the order in which they appear on the main Repository File Maintenance dialog.
- ◆ Within the XML Linkages option under the Manage button, linkages no longer need to be at the current client update level to be compared.

- ◆ When adding or updating a system plan, if the XML Database Linkage and/or the XML Output Linkage differ from what's already in the repository, the message dialog box now shows the system plan(s) affected if you update the linkage(s). A compare button continues to exist to display the differences between the linkages, and a print button has also been added to the dialog box.



- ◆ For more, see [Repository Maintenance](#) on page 12.

## Expressions

- ◆ When used in data defaults, #BCDATE has a new right argument of 99. #BCDATE 99 creates an array of all of the commencement dates. #BCDATE 0 (first commencement date) and #BCDATE 1 (last commencement date) continue to be available in data defaults and are the only options available for non-data default expressions.
- ◆ **Array operators.** The array operators #GETASOF, #GETTABVAL, and #GETVALUE are now available to benefit formulas, benefit formula components, and accrual basis components. #GETTABVAL is useful for complex and frequently changing benefit structures where it is advantageous to be able to update the benefits simply by updating a .CSV or .TXT file that exists outside of ProAdmin. One use of #GETASOF is intra-plan transfers, allowing you to start with the prior plan benefit the day before a transfer. One use of #GETVALUE is to re-create a starting cash balance amount as of a plan amendment effective date.
- ◆ The operators #BCDATE and #DODEC are now allowed in Benefit Formulas, Benefit Formula Components, and Accrual Basis Components.

## Benefit Formula Components

- ◆ **Late Retirement components.** Late Retirement components have been enhanced to include several new options:
  - A years certain and life annuity can now be specified as the normal form of payment.

**Accrued Benefit**

Benefit Formula Component: FinalAvgPay

Normal Form Type: Certain & Life Annuity

Certain Period (years): 10

- You can now stop the actuarial increase at a date other than commencement, such as a suspension of benefits date.

Calculation performed:  At commencement age  
 Annually

Stop actuarial increases at date in field:

- Age can now be specified as exact age, age last birthday (“no months”) or age in years and full months, and can be rounded to a specific number of decimal places.

Age

Calculate factors using:

Age last birthday in years and  months  
 Exact age

Round age to  decimal places

- ◆ **Annuity factors.** When age is interpolated (i.e., some definition of a fractional age with linear interpolation selected), you now have the option to define the beneficiary age as the integral age nearest or last birthday, avoiding 4-way interpolation for joint life factors. (This option is also available for payment forms.)
- ◆ **Cash balance interest crediting.** Cash Balance components have a new option for determining the crediting period accrual basis when the formula is parsed (to determine the change between periods) and there is no credit for some periods. Users can now reflect only the change in the accrual basis formula (e.g., salary) during the current interest crediting period rather than reflecting all previously unrecognized basis amounts. For example, if cash balance service doesn't start until August and interest is credited monthly, previously the August accrual would have been based on the total salary through August. Now the user has the option of saying to only consider the August salary.

Structure | Adjustments | Active Rate Change | Projection | Accruals | Miscellaneous

The crediting period accrual basis is determined by \*

Parsing the accrual basis formula to the change between:  
 Interest crediting periods  
 Recognized accruals in the current plan year  
 Using the accrual basis formula directly

\* Note: This selection works in tandem with the #SALARY custom operator cash balance crediting parsing parameter.

## Custom Operators

- ◆ For U.S. Covered Compensation custom operators, users can now specify how many years prior to decrement wage bases should be frozen.

## Payment Forms

- ◆ **Beneficiary Age.** When age is interpolated (i.e., some definition of a fractional age with linear interpolation selected), you now have the option to define the beneficiary age as the integral age nearest or last birthday, avoiding 4-way interpolation for joint life factors. (This option is also available for annuity factor components.)

**Age & Rounding Assumptions**

Factors based on age:  Nearest  
 Last birthday  
 In years and  months  
 Exact age

Interpolation:  None  
 Linear  
 Round age to  decimal places  
 Override beneficiary age to

Rounding:  None  
 Final factor only  
 All steps

Using rounding rule: Amount:   
Direction:

- ◆ **Annual minimum.** You can now specify a minimum annual amount for payment forms under Plan Definition | Plan Attributes | Miscellaneous Parameters. If a payment form is otherwise under this amount it is set to "not applicable."

**Not Applicable**

If benefit payable is \$0, set payment form value to missing (i.e., N/A)

Set alternative payment forms to N/A when not eligible for Normal Form

Set alternative payment forms to N/A unless annual benefit is at least

## Data Review

- ◆ The Data Review dialog boxes for Final and Estimated benefit calculations have been improved:
  - Align field values to create a more uniform display
  - For coded array fields, the value field is now longer
  - The number of rows for spreadsheet items is now based on the data returned

<b>EarnHistBase:</b>	<table border="1"><thead><tr><th>Start Date</th><th>Stop Date</th><th>Value</th></tr></thead><tbody><tr><td>1/01/1993</td><td>12/31/1993</td><td>9,000.00</td></tr><tr><td>1/01/1994</td><td>12/31/1994</td><td>9,000.00</td></tr><tr><td>1/01/1995</td><td>12/31/1995</td><td>10,000.01</td></tr><tr><td>1/01/1996</td><td>12/31/1996</td><td>12,000.00</td></tr><tr><td>1/01/1997</td><td>12/31/1997</td><td>12,500.00</td></tr></tbody></table>	Start Date	Stop Date	Value	1/01/1993	12/31/1993	9,000.00	1/01/1994	12/31/1994	9,000.00	1/01/1995	12/31/1995	10,000.01	1/01/1996	12/31/1996	12,000.00	1/01/1997	12/31/1997	12,500.00
Start Date	Stop Date	Value																	
1/01/1993	12/31/1993	9,000.00																	
1/01/1994	12/31/1994	9,000.00																	
1/01/1995	12/31/1995	10,000.01																	
1/01/1996	12/31/1996	12,000.00																	
1/01/1997	12/31/1997	12,500.00																	
<b>EeSex:</b>	Male																		
<b>PackageCode:</b>	Estimate																		
<b>ServiceRoll:</b>	<table border="1"><thead><tr><th>Effective Date</th><th>Value</th></tr></thead><tbody><tr><td>12/31/2000</td><td>11.4606433949</td></tr></tbody></table>	Effective Date	Value	12/31/2000	11.4606433949														
Effective Date	Value																		
12/31/2000	11.4606433949																		
<b>StatusHistory:</b>	<table border="1"><thead><tr><th>Effective Date</th><th>Value</th></tr></thead><tbody><tr><td>7/14/1989</td><td>Active</td></tr><tr><td>6/22/1994</td><td>Terminated</td></tr><tr><td>9/22/1995</td><td>Rehired</td></tr></tbody></table>	Effective Date	Value	7/14/1989	Active	6/22/1994	Terminated	9/22/1995	Rehired										
Effective Date	Value																		
7/14/1989	Active																		
6/22/1994	Terminated																		
9/22/1995	Rehired																		

## Output

- ◆ **Include N/A payment forms.** A new option has been added to the Plan Definition | Plan Attributes | Miscellaneous parameters dialog allowing you to include N/A payment forms in output. If checked, N/A payment forms, such as joint life forms when there is no beneficiary specified, will be listed in the Summary Results and Output Definitions. This is useful, for example, to be clear as to what payment form types are potentially available under the plan.

**Not Applicable**

If benefit payable is \$0, set payment form value to missing (i.e., N/A)

Set alternative payment forms to N/A when not eligible for Normal Form

Set alternative payment forms to N/A unless annual benefit is at least

**Include N/A payment forms in output**

When using Server or Desktop (XML) Output Definition types, a node will be written out for the payment form with an empty Primary FOA Amount element. In the example below, the Primary FOA Amount is contained in the element PrimFoaAmt. In the first PaymentFormData node a valid payment form is returned. In the second PaymentFormDataNode an N/A payment form is returned.

```

<PaymentFormData>
  <FoaCode>8</FoaCode>
  <FoaCertPer>0</FoaCertPer>
  <FoaContPctg>0</FoaContPctg>
  <PrimFoaAmt>334955.64</PrimFoaAmt>
  <RelativeValuePct>1</RelativeValuePct>
  <RelativeValueLumpSum>334955.64</RelativeValueLumpSum>
</PaymentFormData>
<PaymentFormData>
  <FoaCode>4</FoaCode>
  <FoaCertPer>0</FoaCertPer>
  <FoaContPctg>0</FoaContPctg>
  <PrimFoaAmt/>
</PaymentFormData>

```

For Desktop (Access) Output Definition Types, the field PrimaryBft in the table Results\_which\_vary\_by\_Payment\_Form\_within\_Commencement\_Date will be empty.

- ◆ **Guaranteed amount.** For Refund Annuity payment forms, the refund (guaranteed) amount is now written out as part of the Output Definition. When using Server or Desktop (XML) Output Definition types you will need to indicate the element that contains the refund annuity guaranteed amount.

**Refund annuity guaranteed amount**

Tag:  

```

<PaymentFormData>
  <FoaCode>19</FoaCode>
  <FoaContPctg>0</FoaContPctg>
  <PrimFoaAmt>11403.96</PrimFoaAmt>
  <RefundAmt>159917.49</RefundAmt>
  <RelativeValuePct>1</RelativeValuePct>
  <RelativeValueLumpSum>226391.31</RelativeValueLumpSum>
</PaymentFormData>

```

For Desktop (Access) Output Definition Types, a new field, GuarAmt, in the table Results\_which\_vary\_by\_Payment\_Form\_within\_Commencement\_Date will contain the guaranteed amount.

- ◆ Cash Balance and Career Average Benefit Formula Component Details will no longer show a zero row prior to the empirical benefit used as the starting point for the calculation in Output Definition results.

Benefit Formula Component details:

Name: CBBenefit

Type: Accrual definition - cash balance

Code: 3

Value at decrement: 208,152.54

Date	MemberAge	BenefitService	AccrualRate	AccrualBasis	Accrual	InterestRate	AccrualInterest	BalanceInterest	BFCResult
12/31/2000	36.5833	11.500000	0.052609	15,500.00	815.43	0.014575	0.00	0.00	12,587.35
3/31/2001	36.8333	11.750000	0.070000	16,500.00	1,155.00	0.014300	0.00	180.00	13,922.35
6/30/2001	37.0833	12.000000	0.070000	16,500.00	1,155.00	0.012750	14.73	162.78	15,254.86
9/30/2001	37.3333	12.250000	0.070000	16,500.00	1,155.00	0.013475	31.33	174.23	16,615.42
12/31/2001	37.5833	12.500000	0.070000	16,500.00	1,155.00	0.012425	43.62	162.82	17,976.87
3/31/2002	37.8333	12.750000	0.070000	17,500.00	1,225.00	0.011625	0.00	208.98	19,410.85
6/30/2002	38.0833	13.000000	0.070000	17,500.00	1,225.00	0.012275	15.04	223.23	20,874.12
9/30/2002	38.3333	13.250000	0.070000	17,500.00	1,225.00	0.012900	31.80	237.48	22,368.40
12/31/2002	38.5833	13.500000	0.070000	17,500.00	1,225.00	0.010650	39.64	198.59	23,831.62

## Mortality Rates

- ◆ **SOA mortality improvement scale MP-2016** has been added to ProAdmin's Mortality Improvement Scales library. To use MP-2016 in one of the ways published by the SOA:
  - Create a new, blank Mortality Rates table
  - Check "Link mortality base rates" and draw rates from one of the eight "SOA RP-2014..." or eight "SOA RPH-2014..." tables.

```
SOA RP-2014 Adjusted to 2006 Blue Collar Mortality (base rates only)
SOA RP-2014 Adjusted to 2006 Disabled Retiree Mortality (base rates only)
SOA RP-2014 Adjusted to 2006 Total Dataset Mortality (base rates only)
SOA RP-2014 Adjusted to 2006 White Collar Mortality (base rates only)
SOA RP-2014 Blue Collar Mortality with Scale MP-2014
SOA RP-2014 Disabled Retiree Mortality with Scale MP-2014
SOA RP-2014 Total Dataset Mortality with Scale MP-2014
SOA RP-2014 White Collar Mortality with Scale MP-2014
SOA RPH-2014 Adjusted to 2006 Blue Collar Headcount-weighted Mortality (base rates only)
SOA RPH-2014 Adjusted to 2006 Disabled Retiree Headcount-weighted Mortality (base rates only)
SOA RPH-2014 Adjusted to 2006 Total Dataset Headcount-weighted Mortality (base rates only)
SOA RPH-2014 Adjusted to 2006 White Collar Headcount-weighted Mortality (base rates only)
SOA RPH-2014 Blue Collar Headcount-weighted Mortality with Scale MP-2014
SOA RPH-2014 Disabled Retiree Headcount-weighted Mortality with Scale MP-2014
SOA RPH-2014 Total Dataset Headcount-weighted Mortality with Scale MP-2014
SOA RPH-2014 White Collar Headcount-weighted Mortality with Scale MP-2014
```

- Check "Apply Improvement Scale" and select SOA Scale MP-2016.
- Specify the base year corresponding to the base rates you picked, either 2006 for the "... Adjusted to 2006 ..." tables or 2014 otherwise.
- Name the table and save it.

Alternatively, you can import the desired table from the MP-2016 Mortality Tables Template available on our [website](#).

Note that the eight mortality tables which are adjusted to 2006 (base rates only) *should not be used directly*. They are provided only as a source table from which the *Link base rates* feature can draw relevant mortality base rates.



## Detailed Results

- ◆ **Eligibility exhibits.** A new "Eligibility" node, displayed directly under the Data Default node, details the evaluation of each unique combination of an Eligibility Definition and a Service Definition Set (or in some circumstances, a Service Definition) referenced by the calculation.

**Eligibility**  
**NRA using Svc Def Set: Vesting Service - (nearest year)**  
**PersonID: 111-11-1111**

Date	Age	DATEOFBIRTH	YOB Temp. Var.	Eligibility Date	Eligible?
12/31/1987	24.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1988	25.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1989	26.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1990	27.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1991	28.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1992	29.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1993	30.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1994	31.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1995	32.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1996	33.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1997	34.266427	9/25/1963	1,963.00	9/25/2029	No
12/31/1998	35.266427	9/25/1963	1,963.00	9/25/2029	No

For ease in checking, footnotes at the end of each table in the Eligibility node detail exactly how that eligibility/service definition combination was used, e.g., for which Benefit Definitions, payment forms, etc..

- ◆ **Footnotes.** Footnotes of late retirement component, annuity factor components and payment forms now include complete information about the rounding methodology selected.
- ◆ **Saving to file.** Saving lots of detailed results tables to Excel is now *much* faster. Also, now there is a single header at the top of the file and a single header at the bottom of the file. (Previously the header and footer were repeated for each report.)
- ◆ As noted in the [Interface](#) section above, there have been significant enhancements to the formatting and display of the output, including the addition of hyperlinks.

## System

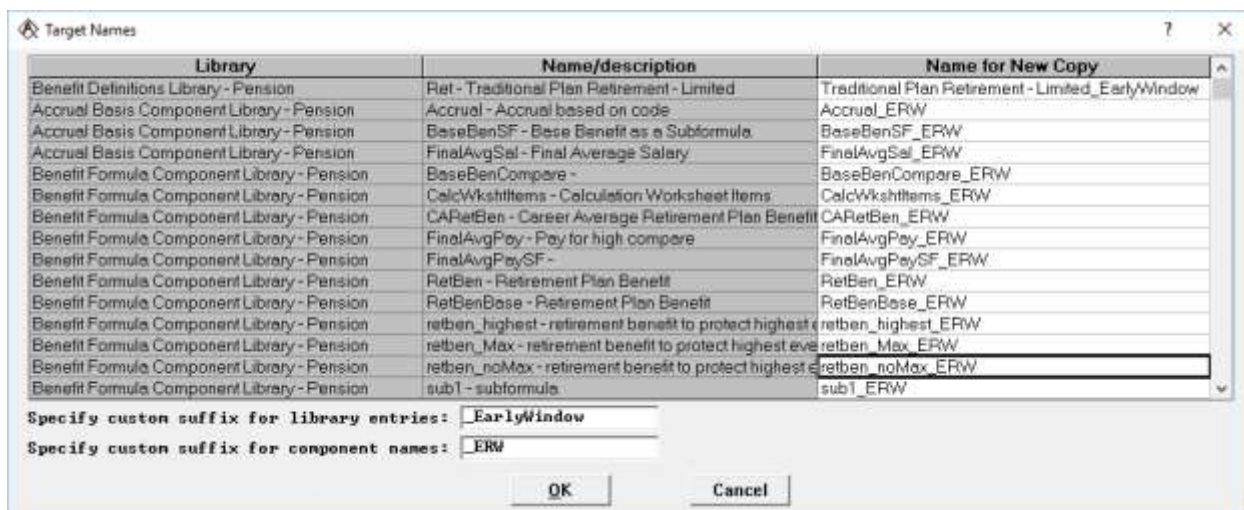
- ◆ **Calculator Testing.** The comparison of audit reports has been improved in an attempt to remove false differences. Now all immaterial information (spaces, periods, and extra lines) are removed and all labels and descriptions are converted to uppercase before the comparison of the baseline and new file are made. When the comparison determines that there are differences, the \_AUDIT2.txt file will no longer contain the new and old lines with the standard + - flagging. Instead, a new text file will be written out with the clarifier \_DIFFS.txt. that contains only the differences between the two (2) files, the standard + - flagging and the (approximate) line number from the \_AUDIT.txt and \_AUDIT2.txt files.

```

- [282]                LUMP SUM EQUIVALENCE INTEREST RATE 0.0176
+ [282]                LUMP SUM EQUIVALENCE INTEREST RATE 0.0179
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
- [339]                DEFERRED_LS_FACTOR 12.899779
+ [339]                DEFERRED_LS_FACTOR 13.272419
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

```

- ◆ **Calculator Testing and ProAdmin Server.** A new setting in the [Server] section of ProAdmin.ini allows for the Audit Report to show monthly payment form values instead of annual. The setting is **SummPymtMnthly=1**. If this isn't present the audit report will continue to show annual amounts.
- ◆ **Custom suffixes for deep copy.** You can now supply your own custom suffix in deep copy, for example, " (\_EarlyWindow)" instead of "#2" for libraries entries and "\_ERW" instead of "\_2" for components.



- ◆ **Faster Browse button.** In File > Open Client, the Browse button now launches instantaneously, rather than having a multi-second lag on first invocation.
- ◆ In the Custom Regulatory Table Library, a type column has been added so you can easily distinguish between compensation and wage base entries.
- ◆ **Pretty Print XML.** Pretty Print XML formatting is used when importing or exporting an XML Database or Output Linkage schema.
- ◆ **Populate.** When a Final calculation library entry is populated from a previously saved Estimate calculation, you can now select Name to be populated, in which case the name will be the name of the copied Estimate.
- ◆ The "error paginating table" message has been eliminated and pagination improved. When a table would otherwise be too wide, ProAdmin now suppresses row titles if they won't fit on the page and spreads columns that are wider than the page onto multiple pages.

- ◆ **System tables.** In ProAdmin Server, a new method was added, "systables", that returns the names and date time stamps of the historical interest rate table files contained in the folder designated by the HIRTDIR setting in ProAdmin.ini. This information is also in the sysinfo method.

```
<?xml version="1.0" ?>
<!-- Created by ProAdmin (Winklevoss Technologies, LLC) -->
<systables>
  <inttables>
    <!-- Directory: C:\WinTech\ProAdminService\data\GovFiles -->
    <!-- 30_Year_Treas_Rate.csv (2/14/2017 12:24 PM) -->
    <!-- PBGC_Interest_Rate.csv (3/08/2016 5:10 PM) -->
    <!-- PPA_Segment Rates_SPOT.csv (8/26/2016 9:35 AM) -->
  </inttables>
</systables>
```

## Website

- ◆ A knowledge base on resolving installation and system issues is now available on our website at <http://www.winklevoss.com/knowledge-base/> (Support > Knowledge Base).

## Changes Log

- ◆ Be sure to read the changes log (see the "changes log.doc" file in the ProAdmin directory) about updates to certain calculations that may change results.



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# Repository File Maintenance

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Several enhancements have been introduced within the File | Server Maintenance | Repository File Maintenance command, providing you with better usability and greater detail about System Plan updates. Views within the Repository File maintenance now have more information and are organized in a more useful manner. Additionally, when adding (replacing) or updating a System Plan, a new report is available, providing a detailed comparison of the existing repository libraries to the current client file libraries.

## Views

The Summary view of the systemplan now shows the XML Output Linkage used by the Output Definition.

```
Date created:          July 17, 2009  10:18
Created by:
Date last modified:   August 29, 2016  15:52
Modified by:          Higgins
Client update level:   August 25, 2016  16:56
Plan Definitions:      ProAdmin Online - batch calculations
Census Specifications: ProAdmin Online version 1
Projection Assumptions: General Assumptions
XML Database Linkage:  Web Estimator
Output Definition:     Batch Calculation Result
(XML Output Linkage:   Calculation Result)
Source client path:    C:\Users\higgins\Documents\proadmin_files\demo\ProAdmin Online\connection sql\
```

The Details view of the system has been enhanced to present all library entries in alphabetical order by and within libraries, as well as to include the date last modified and any Notes for each library entry.

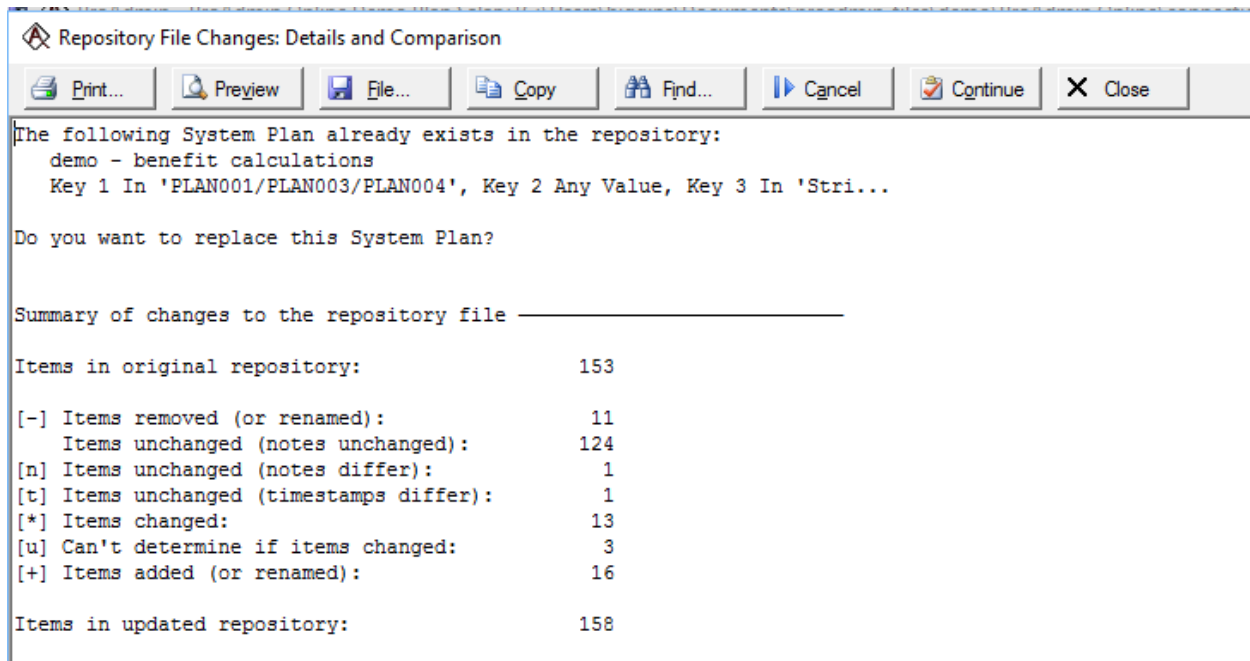
```
Benefit Definitions Library - Pension
  Cash Balance Plan Retirement          (9/23/2008 13:57:51)
    Notes: Updated for 01/01/2005 plan change
      03/14/2007 - change for new cash balance interest crediting
  Traditional Plan Retirement - Limited (6/30/2011 11:49:57)
  Traditional Retirement - Unlimited    (11/30/2009 16:32:04)
```

The new Details and Comparison exhibit documents the changes being made to the systemplan being updated. It has three sections:

1. Numerical summary of the items in the systemplan and the number of changes if any.
2. Listing of each item in the systemplan by type and name, with an annotation of the type of change, if any, that ties back to the summary.
3. Details of the changes for each item known to have changed.

## Summary

The first section of the new Details and Comparison exhibit provides a summary of the changes to the systemplan being updated. The annotation next to each category is used in the second section of the exhibit to indicate the type of change.



For example, in the update above there were:

- 153 library entries used by the systemplan currently in the repository.
- 11 of those 153 were either removed or renamed and will be preceded by “[-]” in the listing that follow.
- 1 had a notes change but no other differences and will be preceded by [n] in the listing that follows.
- 1 had a timestamp update but no other changes and will be preceded by “[t]” in the listing that follows.
- 13 items changed and will be preceded by “[\*]” in the listing that follows. The changes will also be detailed at the end of the report.
- 3 items are flagged as undetermined and will be preceded by the [u] in the listing that follows.
- 16 items were added or renamed and will be preceded by “[+]” in the listing that follows.

Please note that when items are denoted as “[u] Can’t determine if items changed”, it is typically because the existing repository client files are not up to date with the current version of ProAdmin and the library entry in question has changed significantly from that prior version. In this situation, an alternative way to do a comparison is to export the current repository system plan into a version of ProAdmin consistent with its update level, update these client files to the current version of ProAdmin, save a view of the entire Plan Definition to a text file, and, using outside party software, compare it to a text file view of the current Plan Definition. For example, late retirement component enhancements were added to version 3.10 but the current system plan is still in version 3.09 where these options were not available.

## Listing

The second section of the new Details and Comparison exhibit provides a summary of each library item in the SystemPlan, shown in alphabetical order first by library name and then by library entity name. If a library entry has user-specified notes, they are included in this listing.

```
Benefit Formula Component Library - Pension:
  AdjSVDate - Adjusted Service Date
  BaseBenCompare -
[*] BeneAge - Beneficiary Age
[*] BeneDOB - Beneficiary Date of Birth
  BenSvc -
[+] BenSvcAnn -
[+] BenSvcFrzNat12312010 - Benefit Service at 12/31/2010
  CalcWkshtItems - Calculation Worksheet Items
  CARetBen - Career Average Retirement Plan Benefit
[-] CashBalanceBenefit - New Cash Balance Plan Formula
  CashBalBenComp1 - Cash Balance Plan Wks Component
[u] CashBalBenComp2 - Cash Balance Plan Wks Component
  CashBalBenComp3 - Cash Balance Plan Wks Component
[+] CBBenefit - New Cash Balance Plan Formula
```

The items above are from the comparison of the Benefit Formula Component Library. Note that:

- CashBalanceBenefit is no longer used by this system plan [-].
- BeneAge and BeneDOB have changed since the last time the system plan was updated [\*].
- Whether or not there were changes to CashBalBenComp2 is undetermined [u].
- BenSvcAnn, BenSvcFrzNat12312010, and CBBenefit are all new components that will be added to this system plan as part of the update [ + ].

```
Benefit Definitions Library - Pension:
[n] Ret - Cash Balance Plan Retirement
  Ret - Traditional Plan Retirement - Limited
  Ret - Traditional Retirement - Unlimited
```

The items above are from the comparison of the Benefit Definitions Library. Note that:

- Cash Balance Plan Retirement has a notes change but no other differences [n].
- Traditional Plan Retirement – Limited and Traditional Retirement – Unlimited have no differences between the system plan currently in the repository and the system plan updating the repository.

To see the changes, you can scroll down to the details section at the end of the report. This section uses our standard [-] [+] annotation and is in the order of items that are unchanged but have a notes difference [n], followed by all of the changed items [\*]. The items in each section will be in alphabetical order first by library name and then by library entity name.

```
[n] Timestamps are equal, but the notes have changed (1):

Benefit Definitions Library - Pension
  Ret - Cash Balance Plan Retirement (9/23/2008 13:57:51)
    [+] Updated for 01/01/2005 plan change
    [+]
    [+] 03/14/2007 - change for new cash balance interest crediting
    [+]
    [+] 03/23/2017 - roll back to old cash balance
```

The listing above shows the notes difference between the system plan currently in the repository [-] and the system plan updating the repository [ + ].

---

[\*] Items that have been modified (13):

Actuarial Equivalence Library

[-] Dynamic Mortality (9/27/2011 12:25:34)  
[+] Dynamic Mortality (3/14/2017 10:04:40)  
    -[9] 30 Yr Treasury w/ 2 mo lb from January mo  
    +[9] Spot Rate  
    +[10]  
    +[11] Apply PPA phase-in from this GATT Interest Rate table:  
    +[12] 30 Yr Treasury w/ 2 mo lb from January

The listing above shows the coding difference for the Actuarial Equivalence Library entry Dynamic Mortality.

If you should have any questions regarding the new Repository File Maintenance enhancements please don't hesitate to contact WinTech Support at 203.861.5530.