

File Linking

PxPlus 2016 (v13)



File Linking

- Overview

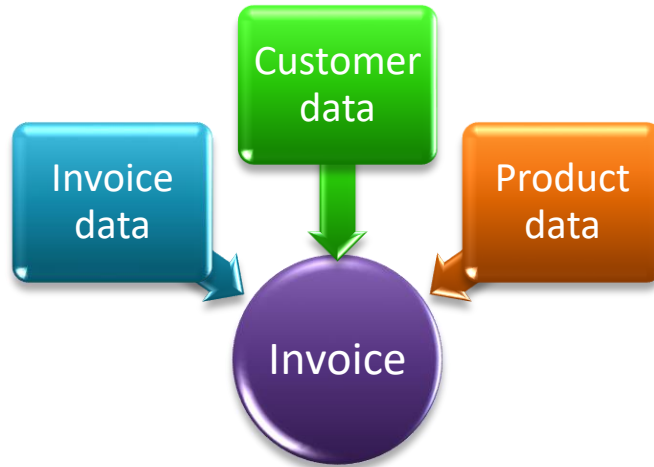
- Application data is spread across multiple files with cross-reference linkages to bind the relationships



File Linking

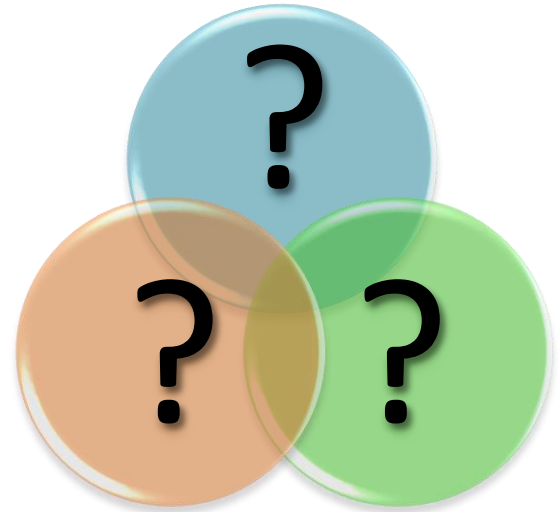
- Overview

- When presenting information to the user, the content is generally made up of bits and pieces from many files



File Linking

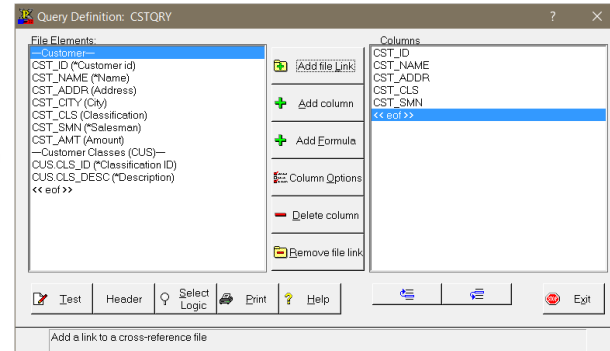
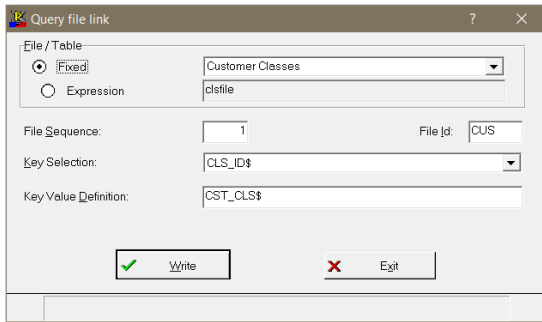
- Overview
 - The challenge is coming up with simple ways to present the complex datasets to the user, keeping in mind that they have no prior in-depth knowledge of the data files, fields, and their relationships as they exist in the application



File Linking

In the beginning...

- The *Query System* allows you to display complex datasets
 - File links are set up in the query definition for simple one-to-one relationships



File Linking

Then...

- *Views*

- Allow you to present and retrieve customized end-user views of various application data
- System designer defines logical representations of datasets that are relevant and accessible to end-users, regardless of the original physical layout

Providex 5.10

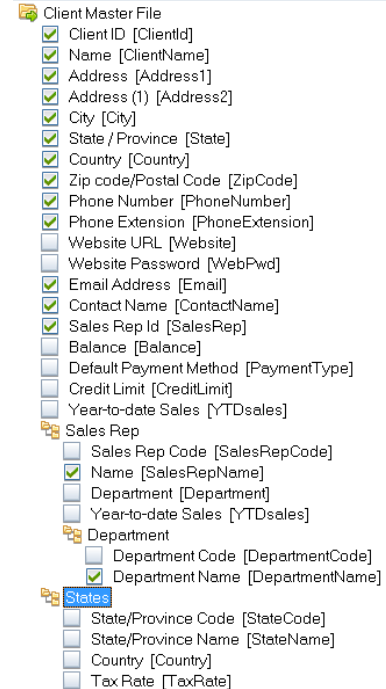


File Linking

Then...

● Views

- The end-user can extract specific data elements for display and reporting purposes — without the need for prior in-depth knowledge of the data files, fields, and their relationships as they exist in the application



File Linking

And now...

- File Linking

- Define and maintain the cross-reference linkages that exist between application data files
 - Based on files defined in Data Dictionary Maintenance
 - Specify the related files and the fields that can be used to populate keys to read the related file
 - A one-to-one relationship is supported between the files, where the fields from one file match the key for the cross-referenced file



File Linking

- Why do we need another approach?
 - Define the relationship once, and apply in multiple locations
 - Query links
 - Views relationships
 - Results in a more flexible drill-down approach to selecting data for the Report Designer



File Linking

- File Linking in Query Definitions
 - Can be used to define file links in query definitions

The screenshot shows a 'Query file link' dialog box with a 'File Links' table. The table has columns: Expr, Link To File/Table, Access Key, Key Expression, Record Prefix, and Read Record. One row is visible with 'Sales Rep' in the 'Link To File/Table' column, 'SalesRepCode\$' in the 'Access Key' column, and 'SalesRep\$' in the 'Key Expression' column. The 'Record Prefix' is 'SLS'. Below this, a 'Select a File Link Definition' dialog box is open, showing a table of link definitions:

Link Description	Link From	Link To	Access Key	Rec Prefix
Client Master to Sales Rep	Client Master File	Sales Rep	Sales Rep Code	csls
Client Master to States	Client Master File	States	State/Province Code	cstate
Sales Rep to Department	Sales Rep	Department	Department Code	sdept

The 'Client Master to Sales Rep' row is selected. The dialog box has 'OK' and 'Cancel' buttons at the bottom.



File Linking

- File Linking in Views
 - Can be used to define data source relationships in Views

The screenshot shows two overlapping dialog boxes from a software application. The background dialog is titled 'Update a Data Source: Invoice Header' and contains a table of relationships. The foreground dialog is titled 'Select a Link Definition' and shows a list of link definitions.

Update a Data Source: Invoice Header - Relationships:

Linked Data Source	Link Name	Item Prefix	Access Key	Key Expression	> 1 rec	No Data Option
Client Master File	Client Master File	Cl_	Client ID	ClientID\$	<input type="checkbox"/> Yes	NULL fields
Invoice Detail	Invoice Detail	Itm_	Invoice Number+Invoice	InvoiceNumber\$	<input checked="" type="checkbox"/> Yes	NULL fields
Sales Rep	Sales Rep	Sr_	Sales Rep Code	SalesRep\$	<input type="checkbox"/> Yes	NULL fields
States	States		State/Province Code	State\$	<input type="checkbox"/> Yes	NULL fields

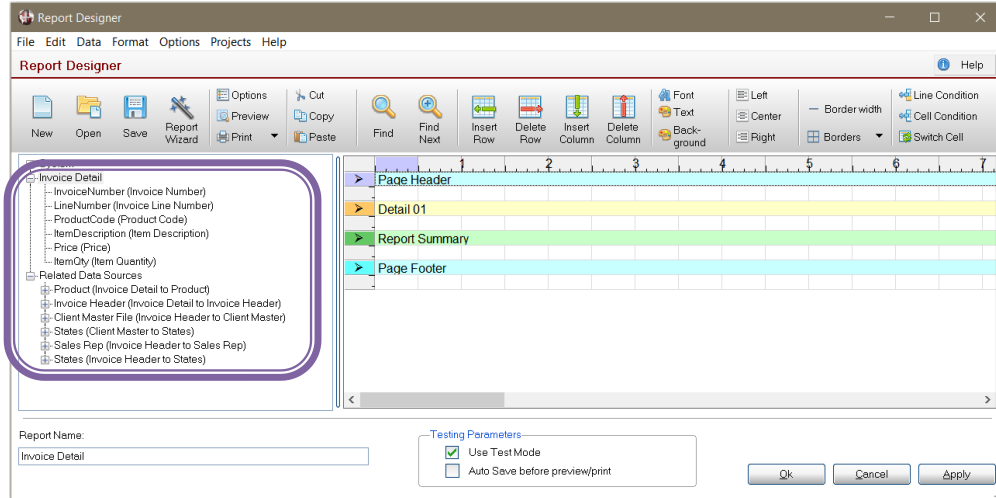
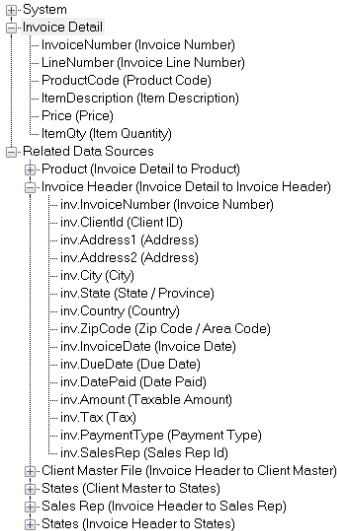
Select a Link Definition - Select a Link Definition:

Data Source to Link To	Link Definition Description	Prefix	Access Key
Client Master File	Invoice Header to Client Master	iclient	Client ID
Sales Rep	Invoice Header to Sales Rep	isls	Sales Rep Code
States	Invoice Header to States	istate	State/Province Code



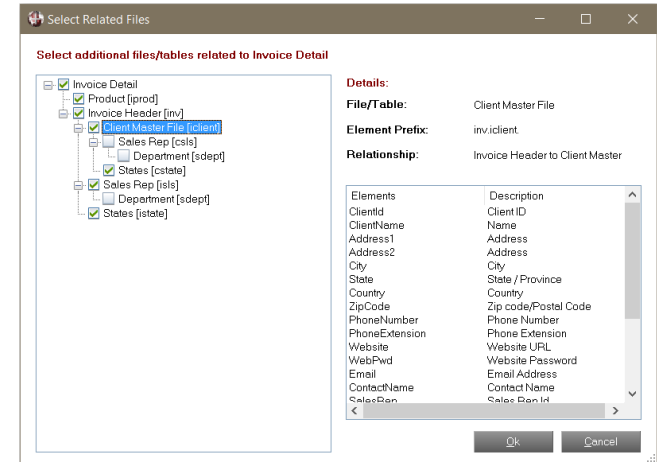
File Linking

- File Linking in the Report Designer
 - Can be used in the Report Designer to select the input data



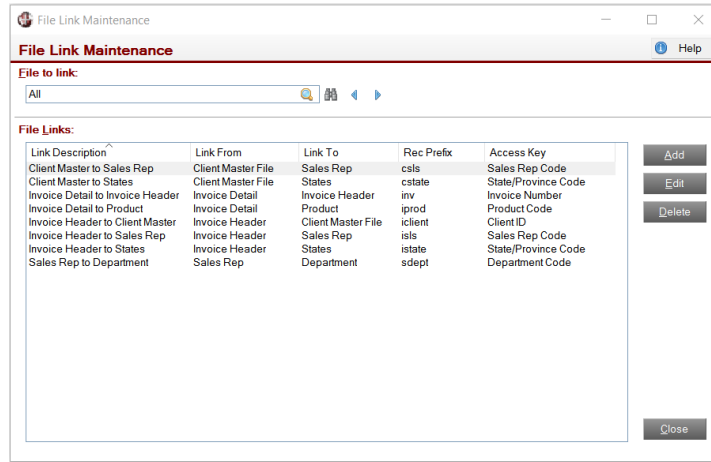
File Linking

- File Linking in the Report Designer
 - Select *Table Name* or *File Path* as *Input Source* (Files must have embedded dictionaries)
 - If the *Input Source* has links defined in **Link File Maintenance**, then you can *Select Related Data Sources* (from *Data* menu or right-click in the data pane)



File Linking

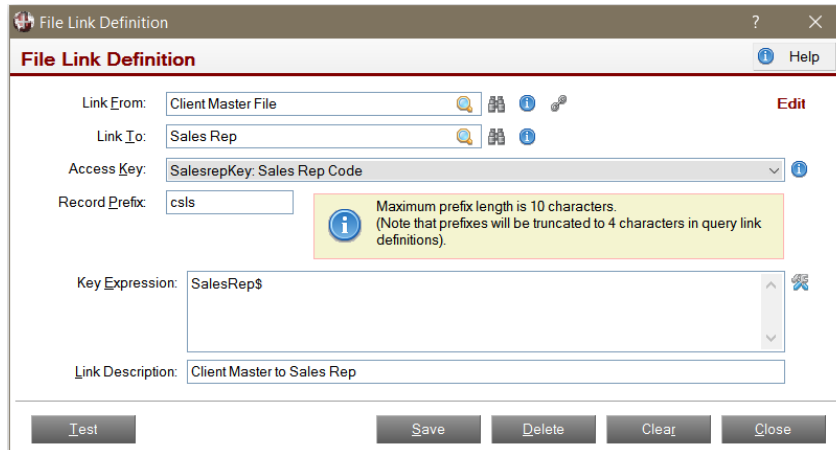
- *File Link Maintenance*
 - Maintains the File Link Definitions
 - Display, Add, Edit, Delete definitions



File Linking

- *File Link Definition*

- Set up the link information
 - Specify the related files and the key expressions to access the related file



The screenshot shows a software dialog box titled "File Link Definition". It contains several input fields and a dropdown menu. The "Link From" field is set to "Client Master File", "Link To" is "Sales Rep", and "Access Key" is "SalesrepKey: Sales Rep Code". The "Record Prefix" field contains "csls". A yellow tooltip is visible over the "Record Prefix" field, stating: "Maximum prefix length is 10 characters. (Note that prefixes will be truncated to 4 characters in query link definitions)." The "Key Expression" field contains "SalesRep\$". The "Link Description" field contains "Client Master to Sales Rep". At the bottom of the dialog, there are buttons for "Test", "Save", "Delete", "Clear", and "Close".



File Linking

● Views vs File Linking

Views	File Linking
One-to-one, One-to-many relationships (one-to-many option reduces file access)	One-to-one relationships only (one-to-many requires re-reading linked file)
Only selected fields are available (secure/less flexibility)	All fields are available (Flexible, less secure)
Views must be created ahead of time. If fields are added to a file, Views must be updated to include them.	Data sets are created on the fly. If a file definition changes, the fields are automatically available.



File Linking

● Views vs File Linking

Views	File Linking
In the Report Designer, the list of View fields appears as a logically flat dataset where the links and field origins are not apparent.	In the Report Designer, the File Links are presented in a hierarchical display where you drill down to select the data you want to want to include. The files are then listed separately in the data pane with the links described.
Support for virtual fields	No virtual fields (not required in Report Writer due to Formulas and Calculated Fields)



File Linking

● Views vs File Linking

Views	File Linking
Built-in interfaces the developer can use to allow the end-user to define or select a View: PROCESS "View_Main", "*views/views.en", v\$, type\$ PROCESS "Select_View", "*views/views.en", v\$, grp\$	Currently there are no interfaces the developer can use to present the File Links to the end-user in their application, other than in the Report Designer
Views definition requires Views or Report Writer package, or Professional or e-Commerce Bundle, or iNomads Wayfarer Pack	Base activation only required



Additional Resources

The help link(s) below refer to the current on-line help pages. The functionality may have been further updated since the PxPlus 2016 (version 13) release.

- [File Link Maintenance](#)
- [File Link Definition](#)
- [Query File Links](#)
- [File Relationships in Views](#)
- [File Linking in the Report Designer](#)

