# The Customizer

PxPlus 2017 (v14) and PxPlus 2018 (v15)

# The Customizer

Agenda

- What is the Customizer?

- Defining Custom Information

- User-Defined Files

- Housekeeping

- Controlling the Customizer

# The Customizer

## Introduction

- Display custom information dynamically on any NOMADS or *i*Nomads panel

- ***No existing application changes***

*Information is displayed in a Customizer grid added to the bottom of the panel…*

# The Customizer

## Introduction

- Display custom information dynamically on any NOMADS or *i*Nomads panel

- ***No existing application changes***



*… or in a concurrent panel displayed next to the parent panel*

2018

# The Customizer

Introduction

- Custom data sources:
  - Application files
  - Formulas
  - User-defined files (modifiable)
- Gear the custom information to specific users or a wider audience
- Uses security classifications to maintain access control
- Full multilingual capabilities

# The Customizer

## Viewing Custom Information

- Automatic Display
  - Information is displayed whenever the panel is displayed

| Info Item | Value |
|---|---|
| Sales Rep Name | Dora King |
| Alternate Contact | Hiram Hayes |
| Alternate Contact Phone | (555) 987-6543 |
| Credit Used | 20% |

  - When adding custom information dynamically to a panel at run-time, the information is displayed immediately following its definition
    - On fixed size panels, the information is displayed the next time the panel is invoked
  - Theme support for Customizer grid

2018

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# The Customizer

## Viewing Custom Information
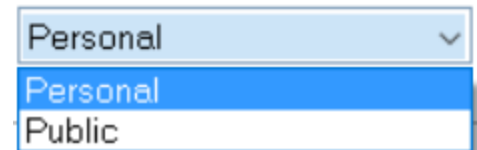
- Concurrent Panel Display
  - Automatically sized to fit information items
    - Resizable, but not subject to persistence
  - Located at top right of parent panel
    - Synchro-locked to parent
  - Panel always there (cannot be closed)

  - NOMADS
    - Set **%NOMADS'Custom_Wdw=1** to turn on the concurrent window display system-wide
  - *i*Nomads
    - Only supports concurrent display

2018

# The Customizer

## Viewing Custom Information

- Control *Who Sees What*
  - Customizer definitions can be:
    - **Personal**, for an individual user
    - **Public**, for a general audience
  - Any panel can have multiple custom definitions
  - Personal definitions take precedence
  - Public definitions
    - For general use
    - Content access is subject to Security Classifications based on NOMADS Security classes
    - Set up by a person with ADMIN or CUSTOMIZER Security Classification
  - *Note:* If no NOMADS Security is set up , then the default is **no** restrictions

| Personal | ⌄ |
|----------|---|
| **Personal** | |
| Public | |

2018

# The Customizer

## Defining Custom Information

- Two utilities to create, edit or delete custom information:
  - *Customize Panel*
  - *Customizer General Maintenance*
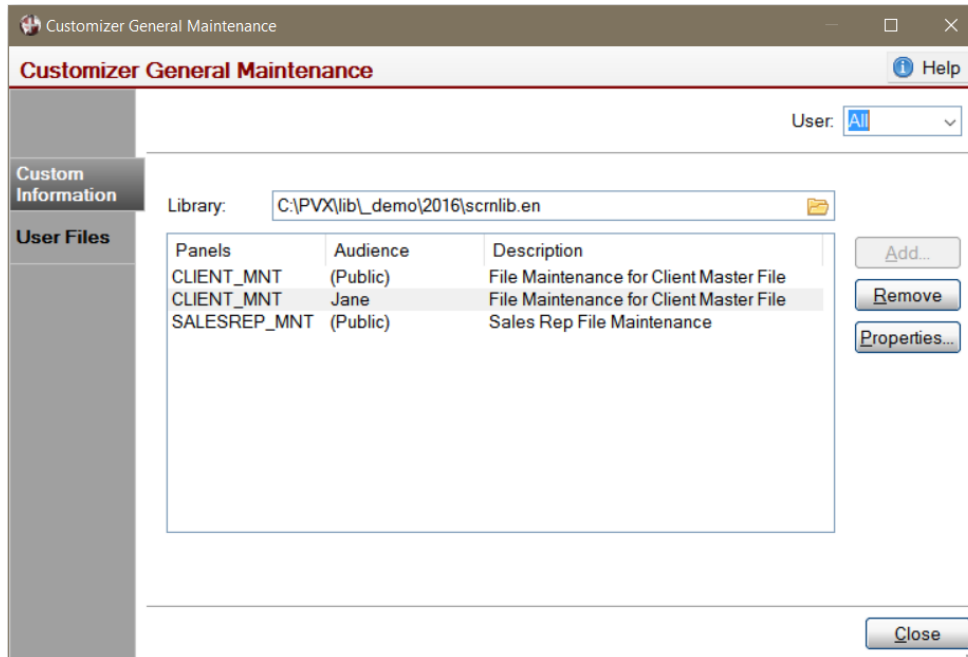
# The Customizer

## Defining Custom Information

- *Customizer General Maintenance*
    - Edit custom information on any panel in any library
    - ADMIN or CUSTOMIZER level security classification required
    - Available through the **NOMADS Library Object Selection** interface     **2017**
        - *Customize Panel* entry in list box popup menu
        - *Customize* button in Button and Toolbar views
    - Available at run-time
        - Generate a 9996 CTL value through a function key, System menu, etc.
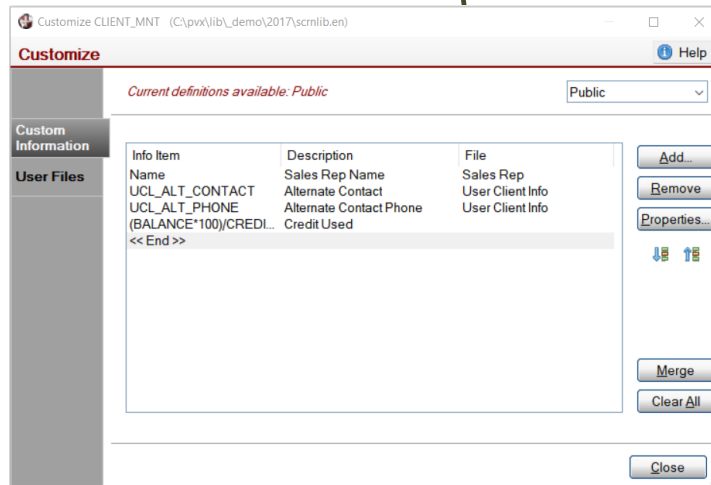    - Available using the `Customize` extended command

# The Customizer

## Defining Custom Information

- *Customize Panel  (run-time definition)*



- • Add custom information to the *current* panel
- • Optionally Available at run-time
  - • *Customize Panel* entry on panel popup menu — 2017
  - • Generate a 9999 CTL value through a function key, System menu, etc.
  - • Availability can be controlled

# The Customizer

## Defining Custom Information

- *Customize Panel*
  - *Add, Remove, Edit information items on the current panel*

  - *Merge*  **2018**
    - Easily share Public and Personal items
    - Copy existing items from other definitions to your custom definition
    - Public items and Personal items marked as shareable
  - *Clear*  **2018**
    - Removes all information items from the current definition

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Add...

Remove

Properties...

Merge

Clear All
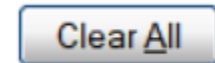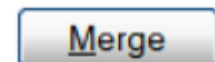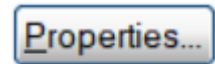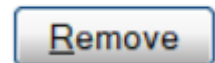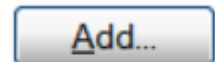
# The Customizer

## Creating Custom Information

- Information Sources
  - Application Files
  - Formulas
  - User-Defined Files

Application →
Formula →
User-Defined →

| Custom Information | Value |
|---|---|
| Name | Robert (Bob) LeChat |
| Credit Used | 59% |
| Alternate Contact | David Joseph |
| Alternate Contact Phone | (123) 456-7890 |
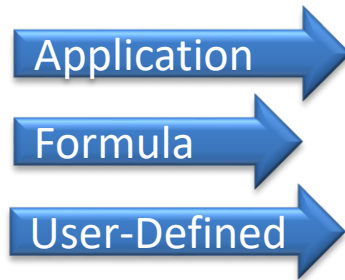
File Maintenance for Client Master File (Custom Information)

- Custom information can consist of one or more items from any or all of the information sources

# The Customizer

Creating Custom Information

- Application Files

  - Add additional information that is not currently displayed

  - Display only

  - Data Dictionary files only

# The Customizer

## Creating Custom Information



- Application Files
  - Identify the *File* by Logical File Name
  - Pick the *Information Item* (or field) to display
  - Define a *Record Identifier* (primary key contents) to identify and access the desired record
    - Built from program variables and panel items
  - Numeric values support a *Normal* display, as well as the new *Percent Bar* display

2017

# The Customizer

## Creating Custom Information

- Formulas
    - Create new information using formulas
    - Numeric calculations
        - Built from digits, numeric functions, file fields and panel information items
    - Text manipulation
        - Concatenate text components comprised of literal values, program variables, file fields  and values from panel items
        - Items may be comprised of substrings, padded or stripped values, and/or case conversions
    - Free-form entry of formulas restricted to those with ADMIN  or CUSTOMIZER Security Classification

# The Customizer

## Creating Custom Information



- Defining the Formula
  - *Short Description*
    - Will appear as the label for the formula results
  - Select the *Type* of data to be manipulated
    - Numeric/Calculation or Text
  - *Maximum Length* of the result
    - Determines column width
  - Define an optional *Display Format* for formatting the data
  - Build the *Formula*
  - Numeric formulas support a *Normal* display, as well as the new *Percent Bar* display

2017

# The Customizer

## Creating Custom Information

- User-Defined Files
  - Files that have been created to hold additional data used by the Customizer
  - Contents defined by the user
  - Data is modifiable

# The Customizer

## Creating Custom Information



- **User-Defined Files**
  - Identify the *File*
  - Pick the *Information Item* (or field) to display
  - Define a *Record Identifier* (primary key contents) to identify and access the desired record
    - Built from program variables and panel items
  - Check the *Allow Update* option to allow data to be entered, updated and deleted
    - Contents of User-Defined Files are updated automatically when a user alters the contents of the Custom grid

# The Customizer

Creating Custom User-Defined Files

- Files whose content is defined by/for the end user
    - Fields determined by user
    - Public or Personal files
        - Public – Security can be set at file and field levels
    - Accessible to multiple panels
    - Field contents can be modified in the Customizer Grid
    - Define using *Customize Panel* or *Customize General Maintenance* interfaces

# The Customizer

## Defining a User-Defined File



- Enter a *Descriptive File Name* to identify the file
- A default *Physical File Name* is generated, but you can enter your own simple file name
  - User-Defined Files placed in **[pxplus exe dir]/custom** directory by default, or you can specify a directory in **%NOMADS'Custom_Dir$** (recommended)
- Add/Edit/Remove file items

# The Customizer

## Defining a User-Defined File



- Add/Remove/Edit *File Items*

  - Enter an *Item Identifier* (Field name) and a brief *Description*

  - Indicate the data *Type*, Text (string) or Calculation (Numeric)

  - Specify the maximum data *Length*

  - Define a *Display Format* (optional)

# The Customizer

## Defining a User-Defined File



- Add/Remove/Edit *File Items*
  - Choose an *Input Type*

    | | |
    |---|---|
    | Input Box | Check Mark |
    | Input with Ellipsis… | Drop Box |
    | Multi_Line Input | Hidden Drop Box |
    | Check Box | Variable Drop Box |

  - Enter optional text labels for Check Box and Check Mark input types in the *Control Text* box. Also enter Drop Box items here, one item per line
  - Public User-Defined Files
    - Click the *Security* button to assign a Security Classification to the File Item

# The Customizer

Defining a User-Defined File

- User-Defined File definitions are stored in the User Dictionary File and Elements files
  - *providex.udf* and *providex.ude*
  - Similar in layout to the Data Dictionary File and Elements files (*providex.ddf* and *providex.dde*)
- User-Defined Files are standard PxPlus VLR files with *embedded* dictionaries
  - External key – 127 bytes
  - Record size – 4000 bytes

# The Customizer

## Defining a User-Defined File

- File Keys

  - User-Defined Files have an external key with a key size of 127

  - Embedded Dictionary name is USER_KEY$

  - The specific make-up of the key is not defined at creation

  - Key contents are defined for individual panels when user items are selected for display

- Data Contents

  - From the user entering data into the customizer grid

  - Content can be populated by developer

# The Customizer

## Looking at User-Defined File Data

- Via the Customizer grid

- Files can be read directly
    - User-Defined Files are standard PxPlus VLR files with embedded dictionaries
    - (You would have to code this)

# The Customizer

## Looking at User-Defined File Data
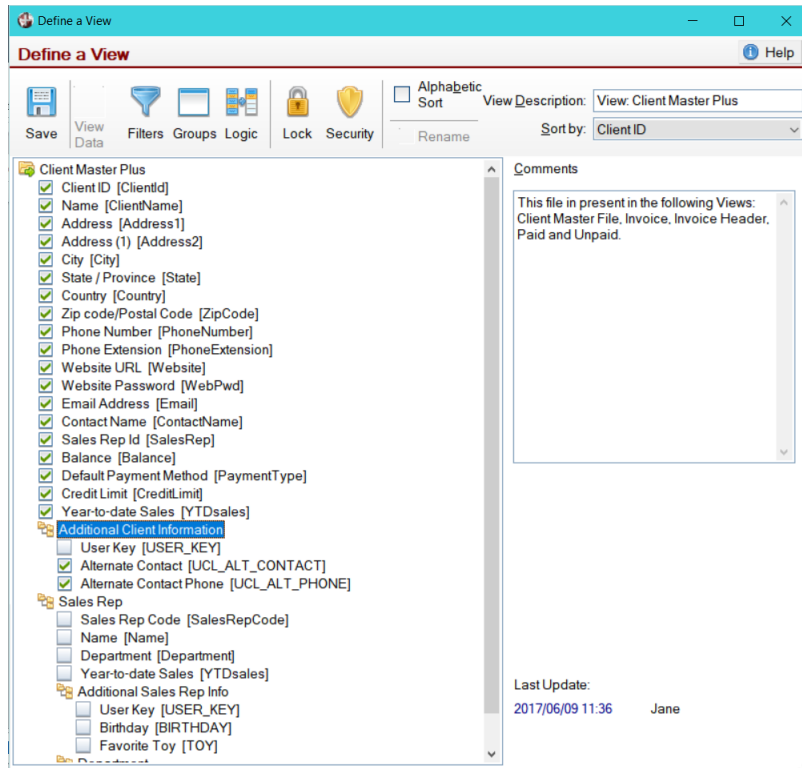


- Files can be used to define *Data Sources* in the **Views** system using the physical file name
  - Relationships with other data sources can be set up to include the user data
  - Views that include User-Defined Files
    - Are accessible to the PxPlus SQL ODBC driver
    - Can be used to create Report Writer reports

# The Customizer

## Housekeeping

- *Customizer General Maintenance*
  - *All User* setting allows access to all Public and Private definitions to:
    - Add new custom panel definitions
    - Remove definitions
    - Modify definitions
    - Add User-Defined Files
    - Remove User-Defined Files
    - Edit User-Defined File Definitions
    - View contents of User-Defined Files
    - Change contents of User-Defined Files

# The Customizer

## Controlling the Customizer

- Who gets to create/modify custom panel definitions?
  - The Developer
    - *Customizer General Maintenance*
      - *Design Mode*
        - NOMADS Library Object Selection
        - **Customize** extended command
      - *At run-time*
        - CTL-9996 generation

    2017

  - The Developer and/or End-User
    - *At run-time*
      - *Customize Panel* popup menu on panel
      - CTL-9999 generation for popup
      - CTL-9996 generation for General Maintenance

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# The Customizer

## Controlling the Customizer

- *Customize Panel* popup menu

  - Availability of *Customize Panel* item on the panel popup menu is highly flexible

    - Popup menu item available to everybody
      - Set **%NOMADS'Enable_Customizer_Popup=1**

    - Popup available on a Panel Library basis
      - Create a Customizer Definition file for the library
        - The *Utility* menu on *the Library Object Selection* interface has an option to *Create/Remove Customizer Library*

    - Suppress the entry on the popup menu altogether
      - I.E. the end user *cannot* define custom information
      - Set **%NOMADS'No_Customize=1**
      - Do not set **%NOMADS'Enable_Customizer_Popup** on

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# The Customizer

## Controlling the Customizer

- Excluding Panels from Customization
    - Deny run-time access to the *Custom Definition* for certain users and/or specific panels
        - Supply your own optional callable program to exclude panels from customization:

            **%NOMADS'Custom_Exclude_Program**=*progpath*$

            Called program has three arguments:
            - Path of current library (read only)
            - Panel name - upper-case, padded to 12 (read-only)
            - Exclude flag – Numeric, *0=Allow customization, 1=Exclude panel from customization* (write-only)
        - Program is called by NOMADS when panel invoked:

            ```
            CALL %nomads'Custom_Exclude_Program$,
            ERR=*NEXT,PTH(%SCR_LIB),PAD(UCS(SCRN_ID$),12),
            _exclude
            ```

# The Customizer

- A Review of What's New
  - Improved Customizer Integration
    - Popup menus
  - New Percent Bar display option for Application fields and formulas

  - New concurrent window display
  - *Merge* and *Clear* definition options
  - Theme support for Customizer grid
  - New CUSTOMIZER security class
  - Ability to exclude panels from definition
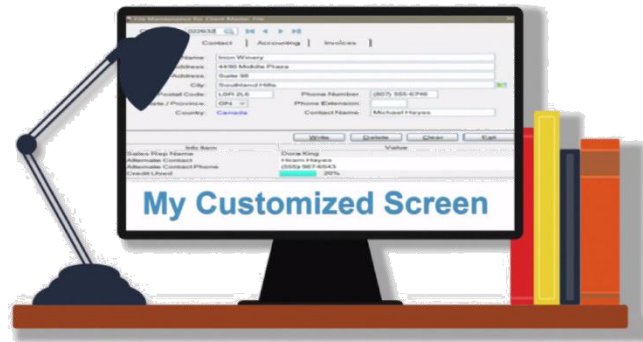  - Integration into *i*Nomads

2017

2018

# The Customizer

- Included in v18 Professional , eCommerce and Wayfarer bundles
  - Also available as a NOMADS Add-on package #20007

- For more information, see the PxPlus Manual:

  [NOMADS Graphical Application > NOMADS Add-Ons > Customizer](#)

An easy way for users

to tailor their screens

**My Customized Screen**

# 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 2018 (version 15) release

- [The Customizer](#)