



PXPLUS ON THE WEB

INTRODUCTION

DireXions 2024

AGENDA

The background of the slide is a photograph of a multi-story urban building. The building has a mix of grey stone and bright red brick facades. It features several windows with air conditioning units and a prominent black metal fire escape on the right side. The sky is a pale, clear blue.

PxPlus Web Tools Overview

Run PxPlus Programs from Web Server

PxPlus Web Services

iNomads

Webster+

Comparison

Webster+



PXPLUS WEB TOOLS OVERVIEW

RUN PXPLUS PROGRAMS FROM WEB SERVER

PXPLUS WEB TOOLS OVERVIEW

RUN PXPLUS PROGRAMS FROM WEB SERVER

- **EZWeb and the PxPlus Web Server will run PxPlus applications based on Web requests**
 - Ran from a browser pointed at the Web server and the program name
 - `https://www.myserver.com/myprog.pxp`
 - You can configure a Web server like Apache or IIS to run PxPlus programs
- **A PxPlus program on a Web server can:**
 - Can access several useful pre-defined global variables documented [here](#)
 - Output a Web page (HTML)
 - `print (%oprint_fn) "<html><body><p>Hello World</p></body></html>"`
 - Act as a Web service and output JSON or XML data
 - `%ocontent_type$="application/json"`
`print (%oprint_fn) "{ \"fruit\": \"Apple\", \"size\": \"Large\", \"color\": \"Red\"}"`
 - Run [*web/merge](#) to allow a normal Web page to make calls to PxPlus programs to perform actions or retrieve data
 - Initial program would define `HTML_FILE$=path_to_html_to_merge$` and then run `*web/merge`
 - In `HTML_FILE$` you have HTML plus special code like `~~cust_name$~~` or `~~myprog?P~~`



PXPLUS WEB TOOLS OVERVIEW

WEB SERVICES

PXPLUS WEB TOOLS OVERVIEW

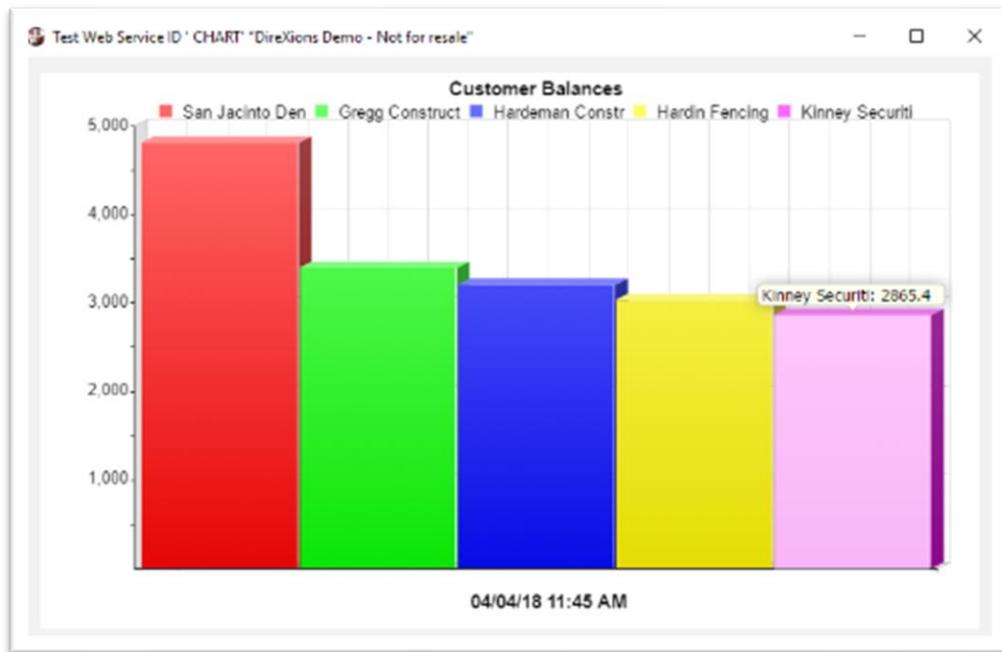
WEB SERVICES

- PxPlus provides some [Web Services](#) you can use without creating yourself
 - [Query](#) - Data (CSV, JSON, XML, HTML, PDF, TABLE) to Web applications
 - <https://..site../services/qry.pxp?qry=query&lib=library>
 - [Report Writer](#) - Reports on demand (PDF, HTML, CSV)
 - <https://..site../services/rpt.pxp?rpt=reportname>
 - [Chart](#) - Charts as images or HTML that can be directly embedded into pages
 - <https://..site../services/chart.pxp?qry=query&lib=library&chart=name>
 - [Maintenance](#) - A file maintenance panel for user input
 - https://..site../services/maint.pxp?dir=directory&dict=dictionary&table=tablename&key_field=keyfield
 - [File Access](#) - URL-style read and write requests for file access
 - https://..site../services/fileaccess.pxp?function=read&dir=data_path&dict=dict&table=table_name&beg_key=key&end_key=key&filter=filter&type=output_type
 - https://..site../services/fileaccess.pxp?function=write&dir=data_path&dict=dict

PXPLUS WEB TOOLS OVERVIEW

WEB SERVICES

- PxPlus Web Services are designed to take advantage of existing PxPlus tools
- PxPlus Web Services work without special configuration with EZWeb and with configuration with Apache and IIS
- Can be secured with OAuth 2.0



Product List

06/04/2018 1

Product Code	Description	Price	Std Cost
BUS-3110-YLW	Bus - Yellow	8.75	7.31
BUS-3111-CYN	Bus - Cyan	8.50	6.38
BUS-3112-VIO	Bus - Violet	10.00	7.50
BUS-3113-GRN	Bus - Green	8.25	6.19
BUS-3114-RED	Bus - Red	10.25	7.69
BUS-3115-BLU	Bus - Blue	8.25	6.19
CAR-1320-GLD	Safari Jeep - Gold	9.25	6.94
CAR-1321-CYN	Safari Jeep - Cyan	9.25	6.94
CAR-1322-VIO	Safari Jeep - Violet	9.50	7.13
CAR-1323-GRN	Safari Jeep - Green	8.75	6.56
CAR-1324-RED	Safari Jeep - Red	9.75	7.31
CAR-1325-BLU	Safari Jeep - Blue	9.00	6.75
CAR-1410-SLV	Bug - Silver	9.25	6.94
CAR-1411-ROS	Bug - Pale Rose	8.25	6.19
CAR-1412-SEA	Bug - Seagreen	8.00	6.00
CAR-1413-VIO	Bug - Violet	8.75	6.56
CAR-1414-PRL	Bug - Pearl	8.50	6.38
CAR-1415-WHT	Bug - White	9.00	6.75
CAR-2220-PNK	Cabriolet - Fuschia	9.00	6.75
CAR-2221-LME	Cabriolet - Lime	8.50	6.38
CAR-2222-CYN	Cabriolet - Cyan	8.25	6.19
CAR-2223-RST	Cabriolet - Rust	8.50	6.38
CAR-2224-VIO	Cabriolet - Violet	9.50	7.13
CAR-2225-SEA	Cabriolet - Seagreen	10.00	7.50
CAR-3120-RED	Camino - Red	9.25	6.94
CAR-3121-GRN	Camino - Green	8.25	6.19
CAR-3122-BLU	Camino - Blue	8.50	6.38
CAR-3123-YLW	Camino - Yellow	9.25	6.94

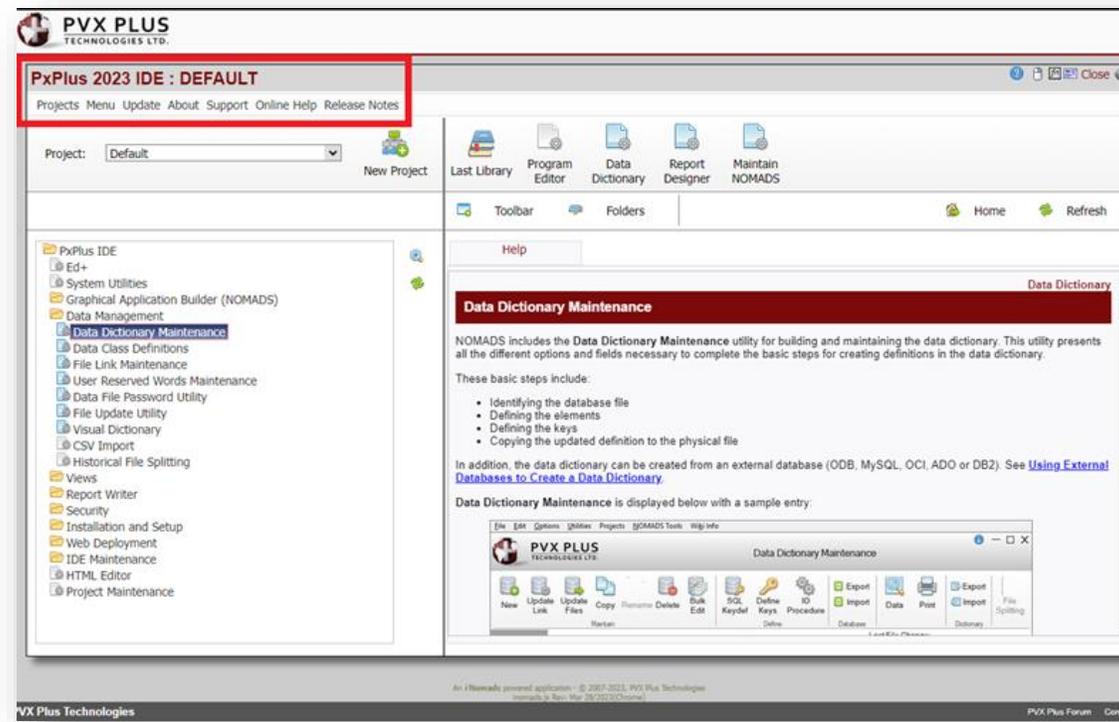
A photograph of a wooden suspension bridge with a red banner overlay. The bridge is made of weathered wood and spans across a body of water, surrounded by lush green trees. The banner is a solid red shape with a slight perspective, containing white text. The overall composition is clean and modern, with a focus on natural elements and a clear message.

PXPLUS WEB TOOLS OVERVIEW INOMADS

PXPLUS WEB TOOLS OVERVIEW

INOMADS

- iNomads lets you take your NOMADS and even non-NOMADS PxPlus panels and run them on the Web
 - **No Coding Required**
- Your application will function the same as it did if running on Windows
- Look and feel of the application is controlled via templates (CSS)
- iNomads will work without special configuration with EZWeb and with configuration with Apache and IIS





PXPLUS WEB TOOLS OVERVIEW

WEBSTER+

PXPLUS WEB TOOLS OVERVIEW

WEBSTER+

- [Webster+](#) allows you to create a truly Web-based PxPlus application
 - Stateless Web-based pages
 - Responsive
 - Scalable
- Webster+ makes both the generation of Web pages and setup of Web sites easier
 - Built-in site setup, logon, link, and menu systems
 - File maintenance can generate Webster+ pages
 - Queries and reports work automatically
- Webster+ will work without special configuration with EZWeb and with configuration with Apache and IIS
- Application will need a partially redesigned UI
 - This is because of the difference between NOMADS and a true Web REST-style interface where every exchange between the browser and the host is standalone with no residual resources maintained on the server

PXPLUS WEB TOOLS OVERVIEW

WEBSTER+



Sales

Warehouse

Receivables

Payables

Accounting

Settings

Inspector

Setup

Logoff

Admin

Privacy Policy

Statistics

« Canadian Automotive Toy Supplies

[Order Entry](#)
[View](#)
[Edit Files](#)
[Tools](#)
[Reports](#)
[Exit](#)

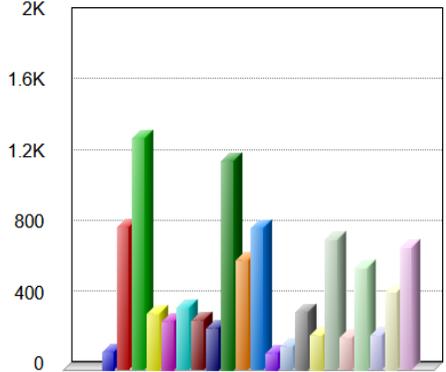
Sales Dashboard

This would be a great place to insert a few charts and tables along with some shortcuts to often used processes.

Currently Active Invoices

Invoice#	Date	Status	Location	Client	Client Name
000029	2021-07-14	Waiting to Ship	Markham	162747	Howard Locksmiths
000030	2021-07-14	Shipped (not posted)	Markham	422321	Palo Pinto Delivery Service
000031	2021-07-14	Waiting to Ship	Calgary	680190	Upton Coffee Shop
000032	2021-07-14	Waiting to fill	Markham	882769	Burnet Repairs
000033	2021-07-14	Waiting to fill	Calgary	539676	San Jacinto Snackbar
000034	2021-07-14	Waiting to fill	Markham	024363	Falls Theatre

90 Day Revenue by Product Type [+]



- 2 Person City Car
- 2 Person Sporty City Car
- 2Dr Sedan
- 4Dr Coupe
- Bus
- Camino
- Camper Van
- City Car SUV
- Convertible Sports Car
- Luxury Limc
- Luxury SUV
- Offroad Rover
- Panel Van
- Passenger Van
- Pickup Panel Truck
- Pickup Truck
- Roadster Sport
- SUV
- Safari Jeep
- Sports Car
- Street Legal Racer



PXPLUS WEB TOOLS OVERVIEW COMPARISON

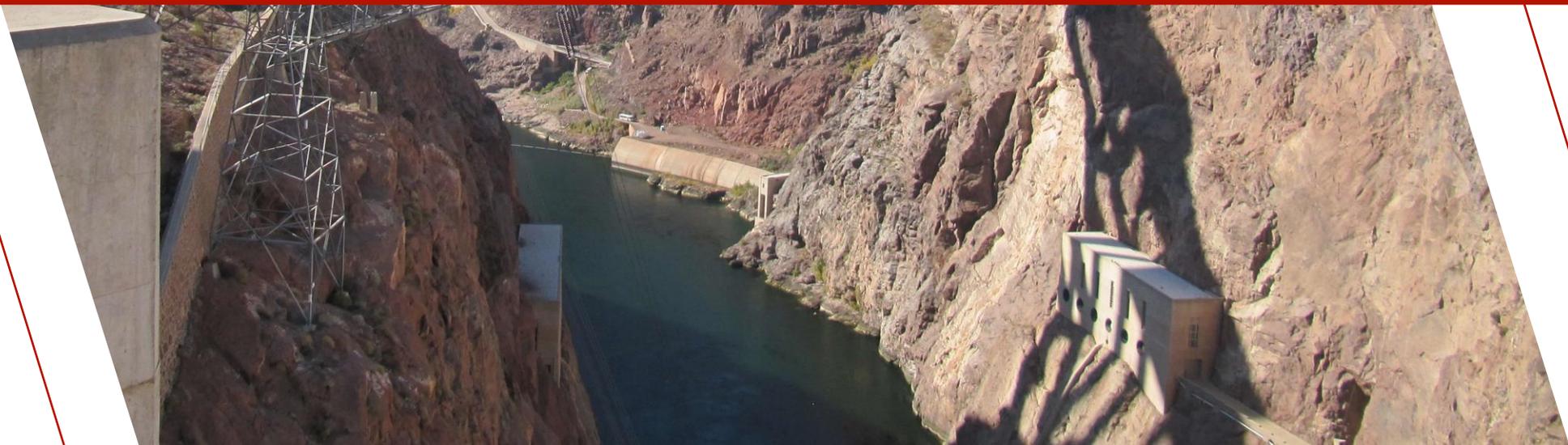
PXPLUS WEB TOOLS OVERVIEW

COMPARISON

PxPlus Web Tools	Pros	Cons
Run PxPlus Programs from Web Server	<ul style="list-style-type: none"> • Most control and customization 	<ul style="list-style-type: none"> • Oldest • Most "Do-It-Yourself" approach (more work)
PxPlus Web Services	<ul style="list-style-type: none"> • Great if you only need a query or report etc. 	<ul style="list-style-type: none"> • Not useful when you need anything else
iNomads	<ul style="list-style-type: none"> • "No code" way to take your existing application and run it on the Web • Can use Nomads screen designer to build web screens 	<ul style="list-style-type: none"> • Doesn't scale well beyond 300 users • Not a true Web stateless application • Not as fast - it has to communicate more to emulate the Windows environment it was designed for
Webster+	<ul style="list-style-type: none"> • True Web application <ul style="list-style-type: none"> • Fast • Responsive • Scalable • More modern true Web look • Built-in Login, Menu and Link system • Can run iNomads pages with Webster+ • File Maintenance, Queries and Reports all work 	<ul style="list-style-type: none"> • Need to partially rewrite UI • No screen designer within PxPlus toolset



WEBSTER+



WEBSTER+ OVERVIEW

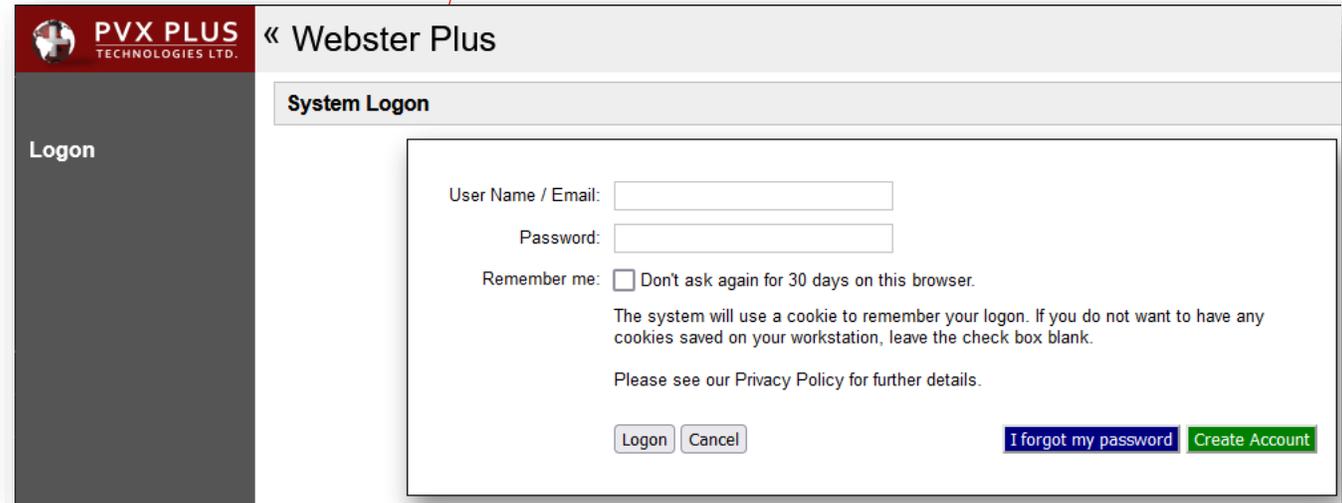
- When you access a Webster+ application from the browser, you will see the landing page (can be application specific or user specific)
- Layout, look and feel is controlled via templates and CSS
- Usually, you will have Links on the left to different parts of your application and/or a Menu at the top
- If Security is enabled, you will just have a Login
- Setup only seen by Administrator
- Logon system, Links, Menus and Setup are all built into Webster+ - you don't have to code and build yourself

The screenshot displays the Webster Plus application interface. At the top left, there is a logo for PVX PLUS TECHNOLOGIES LTD. and a navigation menu with the word "Setup". The main content area is titled "Webster Plus" and "Default Landing Page". It contains text explaining that this is the default page for users and that it can be replaced by a page named "_default.html". Below this, it lists typical content for the page: Contact Information, Address, Web site addresses, and Recent Events or News. It also suggests adding weather information, which is shown in a blue weather widget for Toronto. The weather widget displays "TORONTO WEATHER" with a cloud icon, a current temperature of 22°C and "overcast clouds", and a 7-day forecast table.

	Wed	Thu	Fri	Sat	Sun	Mon	Tue
TORONTO WEATHER							
22°C	22°C	23°C	21°C	20°C	19°C	20°C	19°C
18°C	18°C	17°C	17°C	17°C	18°C	17°C	11°C

WEBSTER+ OVERVIEW

- **Built-in Logon System (if Security is enabled)**
 - Can remember Login
 - Create an Account
 - Recover forgotten Password



PVX PLUS
TECHNOLOGIES LTD.

« Webster Plus

Logon

System Logon

User Name / Email:

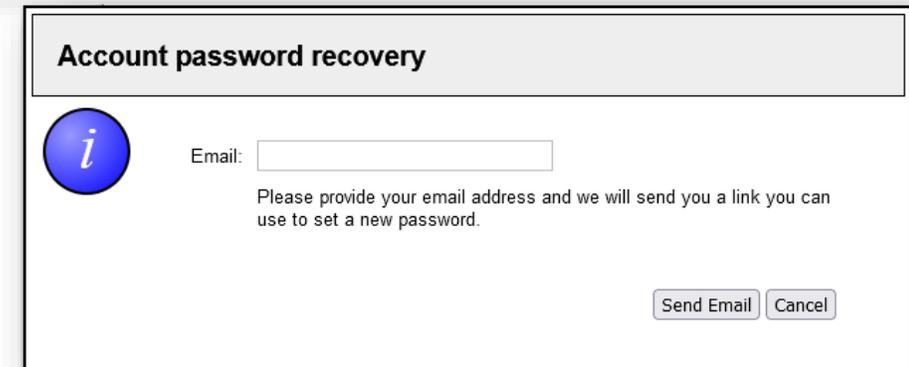
Password:

Remember me: Don't ask again for 30 days on this browser.

The system will use a cookie to remember your logon. If you do not want to have any cookies saved on your workstation, leave the check box blank.

Please see our Privacy Policy for further details.

[I forgot my password](#) [Create Account](#)



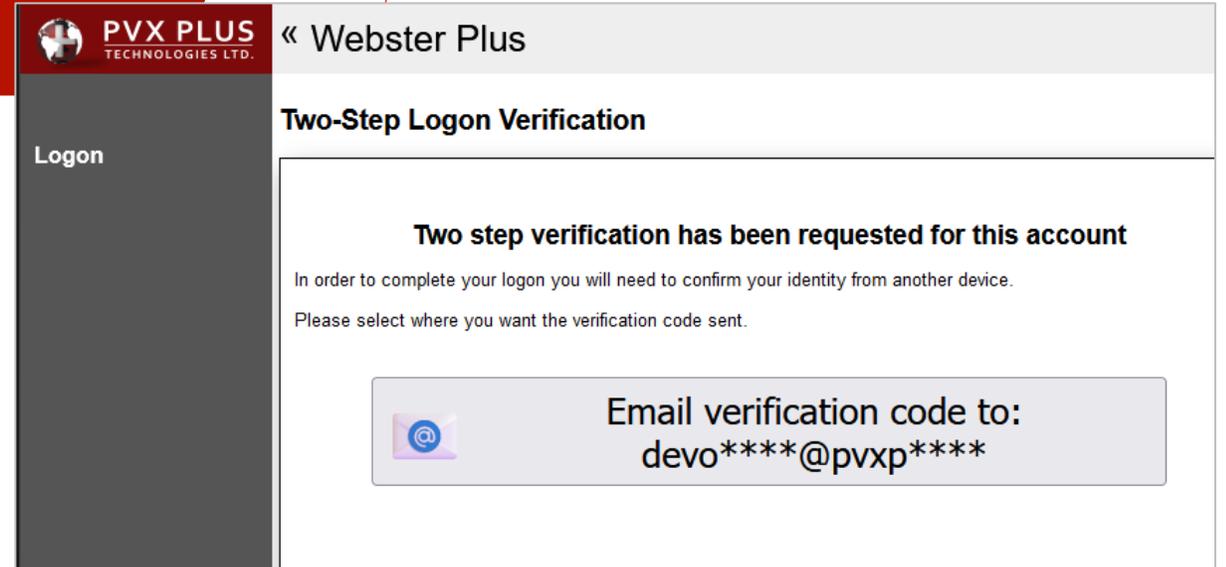
Account password recovery

 Email:

Please provide your email address and we will send you a link you can use to set a new password.

WEBSTER+ OVERVIEW

- If [Two-Factor Authentication \(TFA\)](#) is enabled, user will be shown a screen to select the TFA method
- Then user will get a screen to input the Verification Code they received either via email or SMS



PVX PLUS TECHNOLOGIES LTD. « Webster Plus

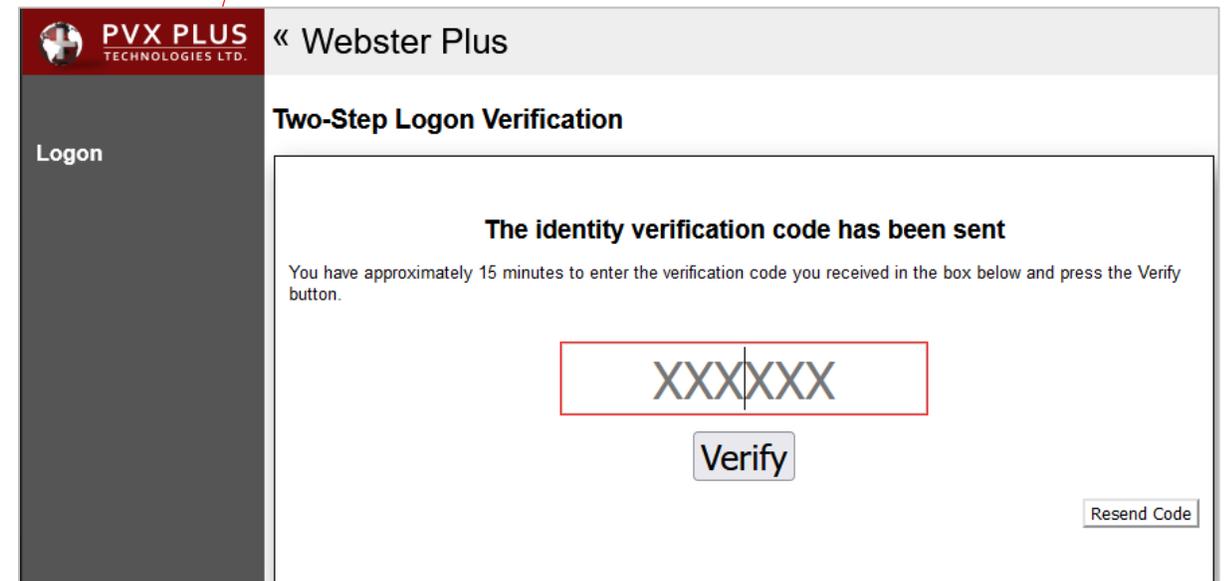
Logon

Two-Step Logon Verification

Two step verification has been requested for this account

In order to complete your logon you will need to confirm your identity from another device.
Please select where you want the verification code sent.

Email verification code to:
devo****@pvxp****



PVX PLUS TECHNOLOGIES LTD. « Webster Plus

Logon

Two-Step Logon Verification

The identity verification code has been sent

You have approximately 15 minutes to enter the verification code you received in the box below and press the Verify button.

XXXXXXX

Verify

Resend Code

WEBSTER+ OVERVIEW

- **Create Account Utility**

- Used by your users to create an account
- Simple bot protection for account creation included
- Users can enable Two-Factor Authentication

PVX PLUS TECHNOLOGIES LTD. « Webster Plus

Register New user

User Name:

First Name:

Last Name:

Password:

Re-enter Password:

Email Address:

Cell Phone Number: (used for two-step verification)

Company: (optional)

Security Group:

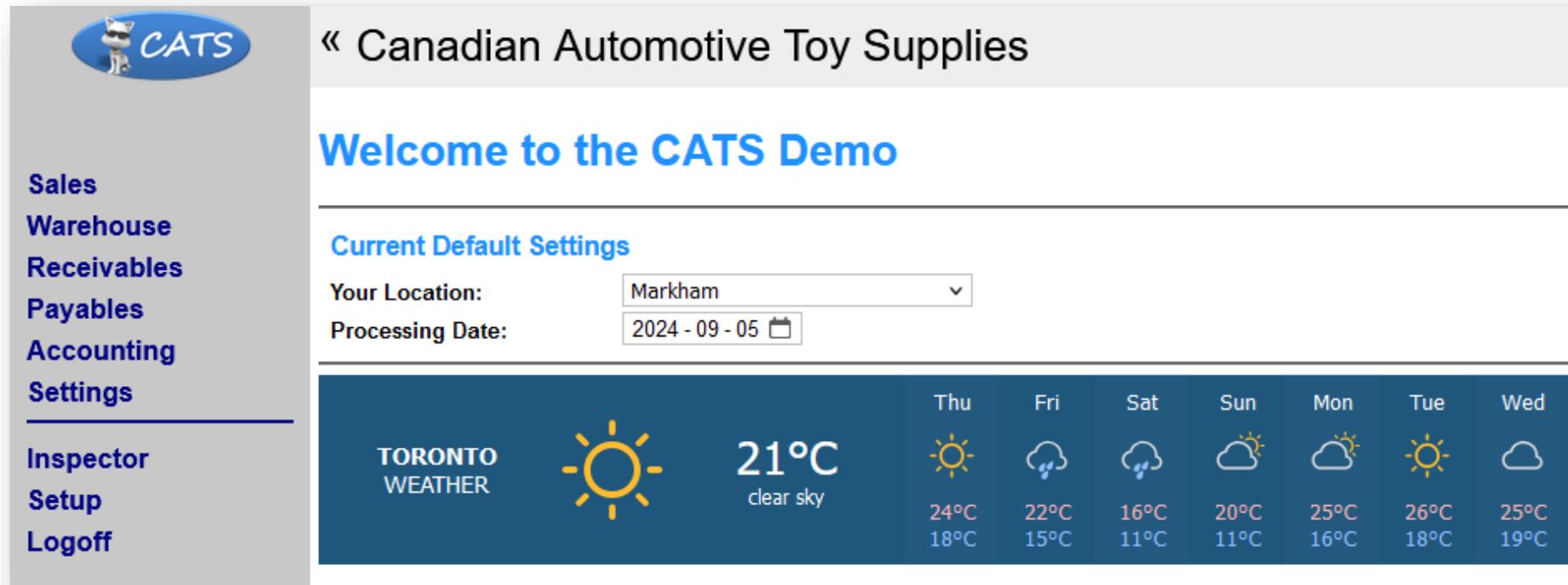
Two-step Verification:

To confirm you are human, please select all the **blue diamonds**.

<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				

WEBSTER+ OVERVIEW

- Demo Webster application seen here can be accessed via <https://testdrive.pvxplus.com>
 - Can request link to unique webster+ demo instance for you to play
 - Links to downloads of all the code behind the demo
- Once logged in, you will see the application-defined Links and Menus, as well as a **Logoff** option
- If set up as an Admin (System Administrator), you will also see **Setup** and **Inspector** options



« Canadian Automotive Toy Supplies

Welcome to the CATS Demo

Current Default Settings

Your Location:

Processing Date:

	Thu	Fri	Sat	Sun	Mon	Tue	Wed
TORONTO WEATHER							
21°C clear sky	24°C 18°C	22°C 15°C	16°C 11°C	20°C 11°C	25°C 16°C	26°C 18°C	25°C 19°C

WEBSTER+ OVERVIEW

- Clicking on one of the Links loads one of the application pages
 - Example on the right shows
 - Menu at the top
 - List Box with drill downs for Invoice and Client data
 - An interactive Chart
- Links in the bottom left of the default template
 - Your User Maintenance page
 - Privacy Policy
 - Statistics page (Admin Only)

The screenshot displays the CATS web application interface. At the top, the title is "Canadian Automotive Toy Supplies". Below the title is a navigation menu with options: Order Entry, View, Edit Files, Tools, Reports, and Exit. A sidebar on the left contains a menu with categories: Sales, Warehouse, Receivables, Payables, Accounting, Settings, Inspector, Setup, and Logoff. The main content area shows a "Sales Dashboard" with a placeholder for charts and tables. Below this is a table titled "Currently Active Invoices" with columns for Invoice#, Date, Status, Location, Client, and Client Name. The table contains six rows of data. At the bottom of the dashboard is a bar chart titled "90 Day Revenue by Product Type" with a legend listing various vehicle types and their corresponding colors. The chart shows revenue data for the date 09/05/24 at 09:41 AM.

« Canadian Automotive Toy Supplies

Order Entry View Edit Files Tools Reports Exit

Sales Dashboard

This would be a great place to insert a few charts and tables along with some shortcuts to often used processes.

Currently Active Invoices

Invoice#	Date	Status	Location	Client	Client Name
000029	2021-07-14	Waiting to Ship	Markham	162747	Howard Locksmiths
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000034	2021-07-14	Waiting to fill	Markham	024363	Falls Theatre

90 Day Revenue by Product Type

Legend:

- 2 Person City Car
- 2 Person Sporty City Car
- 2Dr Sedan
- 4Dr Coupe
- Bus
- Camino
- Camper Van
- City Car SUV
- Convertible Sports Car
- Luxury Limo
- Luxury SUV
- Offroad Rover
- Panel Van
- Passenger Van
- Pickup Panel Truck
- Pickup Truck
- Roadster Sport SUV
- Safari Jeep
- Sports Car
- Street Legal Racer

Admin Privacy Policy Statistics

09/05/24 09:41 AM

WEBSTER+ OVERVIEW

- Reports work - **No Coding Needed in Webster+**

« Canadian Automotive Toy Su

Invoice - invoice.3351391.38367 x

https://demo.pvxplus.com/webster.pxp?tx\$=*file&token\$=Lm82RwDZOSuXb

1 of 1 Automatic Zoom

Canadian Automotive Toy Supplies

West Coast Office
6050 Silver Springs Blvd NW
Calgary, Alberta
Canada T3B 4R3

GST Number: 45454566XX
E-transfer: accts.receivable@cats.ca

Sold to: San Jacinto Snackbar
Account: 539676

Bill To: 361 Rustic Creek Walk
Tatlayoko Lake, British Columbia
Canada V8Y 4P7

Ship To: 361 Rustic Creek Walk
Tatlayoko Lake, British Columbia
Canada V8Y 4P7

Shipped Via: Mail Weight: 450 Grams

Invoice: 000033
Invoice Date: 2021-07-14
Payment Terms 30 Days
Payment Due Date: 2021-08-13
Currency CAD
Your Purchase Order:

Qty	Units	B/O	Product	Description	Std Price	Disc %	Adj Price	Total
10	EA		CAR-3220-LME	2 Person City Car - Lime	8.50		8.50	85.00
	EA	6	LUX-3214-GRN	Luxury Limo - Green	16.25		16.25	
8	EA		SPR-1215-SKY	Sports Car - Skyblue	13.50		13.50	108.00
7% Provincial Sales tax (BC) on \$193.00								13.51
5% General Sales Tax on \$193.00								9.65
Invoice Total								216.16

WEBSTER+ OVERVIEW

- Queries work - **No Coding Needed in Webster+**

Product Master File Maintenance ✕

Product Lookup

Product Code	Product Description	Supplier	Mfg No.	Product Categ...	Inventory	Units	List Price	Sales Tax Grp
SPR-2314-VIO	Sport SUV - Violet	ADZAM	2314/VIO		390	EA	12.50	Taxable
SPR-2315-CYN	Sport SUV - Cyan	ADZAM	2315/CYN		408	EA	13.00	Taxable
SPR-3420-ORG	Roadster Sport - Orange	ADZAM	3420/ORG		473	EA	12.00	Taxable
SPR-3421-GRN	Roadster Sport - Green	ADZAM	3421/GRN		357	EA	13.75	Taxable
SPR-3422-BLU	Roadster Sport - Blue	ADZAM	3422/BLU		324	EA	13.00	Taxable
SPR-3423-LME	Roadster Sport - Lime	ADZAM	3423/LME		303	EA	12.25	Taxable
SPR-3424-PNK	Roadster Sport - Fuschia	ADZAM	3424/PNK		215	EA	12.00	Taxable
SPR-3425-SKY	Roadster Sport - Skyblue	ADZAM	3425/SKY		392	EA	13.00	Taxable
SPR-4220-ORG	2 Person Sporty City Car - Orange	ADZAM	4220/ORG		46	EA	13.00	Taxable
SPR-4221-SEA	2 Person Sporty City Car - Seag...	ADZAM	4221/SEA		403	EA	12.00	Taxable
SPR-4222-VIO	2 Person Sporty City Car - Violet	ADZAM	4222/VIO		502	EA	12.50	Taxable
SPR-4223-LME	2 Person Sporty City Car - Lime	ADZAM	4223/LME		219	EA	12.00	Taxable
SPR-4224-PNK	2 Person Sporty City Car - Fuschia	ADZAM	4224/PNK		205	EA	13.75	Taxable
SPR-4225-BLU	2 Person Sporty City Car - Blue	ADZAM	4225/BLU		354	EA	12.00	Taxable
SPR-4320-BLU	Sport Convertible - Blue	ADZAM	4320/BLU		317	EA	13.00	Taxable
SPR-4321-PNK	Sport Convertible - Fuschia	ADZAM	4321/PNK		318	EA	14.25	Taxable
SPR-4322-LME	Sport Convertible - Lime	ADZAM	4322/LME		439	EA	13.75	Taxable
SPR-4323-VIO	Sport Convertible - Violet	ADZAM	4323/VIO		392	EA	13.50	Taxable
SPR-4324-GRN	Sport Convertible - Green	ADZAM	4324/GRN		492	EA	13.00	Taxable
SPR-4325-ORG	Sport Convertible - Orange	ADZAM	4325/ORG		52	EA	13.00	Taxable
Support	Product Support				N/A	HR	100.00	Taxable
SUV-1310-BLK	SUV - Black	CAR2GO	SUV1310B...		445	EA	8.50	Taxable
SUV-1311-BUR	SUV - Burgundy	CAR2GO	SUV1311B...		150	EA	10.00	Taxable
SUV-1312-GRN	SUV - Green	CAR2GO	SUV1312...		325	EA	8.00	Taxable
SUV-1313-VIO	SUV - Violet	CAR2GO	SUV1313VIO		184	EA	8.75	Taxable
SUV-1314-GRN	SUV - Green	CAR2GO	SUV1314...		307	EA	8.50	Taxable

Print
Download
Select
Cancel

WEBSTER+ OVERVIEW

- Webster+ HTML pages can be generated by the [File Maintenance Generator](#) - **No Coding Needed**

Client Master File Maintenance

Client ID:

Name:

Description | Accounting | History

Address

Address Line 1:

Address Line 2:

City:

State/Province: ▼

Country Name: ▼

Zip/Postal Code:

Website URL:

Contact Info

Primary Contact:

Email Address:

Phone Number:

Phone Extension:

Mobile Number:

Fax Number:

WEBSTER+

INSTALL

- Webster+ can be installed by using the following methods (if using EZWeb or Apache):

Location	Method
From the PxPlus IDE Main Launcher	Expand the Web Deployment category and select Install Webster+ See Installing from the IDE Main Launcher
From the PxPlus Command window	Enter: <code>run "*webster/install"</code> See Installing from the Command Line

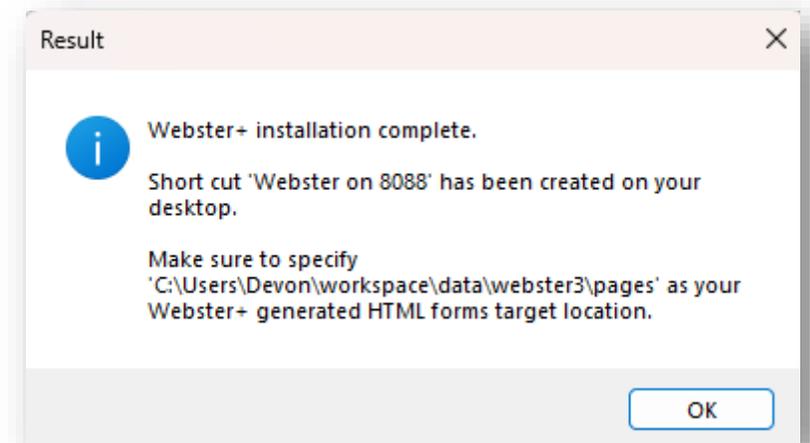
- **Before running the Install program, you will need to know the following:**
 1. The directory in which you want to create the Webster+ setup (**docroot** will be created as a sub-directory)
 2. Which Web server you will be using
 3. Which Port number you want to use (HTTP Port 80, HTTPS Port 443, or other)
 4. If using an SSL/TLS secure connection and EZWeb, you will need the pathname to your PEM file
 5. If using Apache, the domain name of the Apache server

WEBSTER+ INSTALL

- **The installer will create**
 - Basic Webster+ install directory

Sub-Directory	Description
data	Will contain your data files
docroot	Default web server home directory where you will find webster.pxp and start_up.web
pages	Will contain your HTML pages
prog	Will Contain your Webster+ application programs

- The files you need to configure/run EZWeb or Apache



WEBSTER+ INSTALL

- **If using EZWeb**
 - On Windows, it will create a desktop short cut to launch EZWeb
 - On UNIX/Linux, it will create a script file, which can be used to start EZWeb
- **If using Apache**
 - It will create the PxPlus CGI script to put in the Apache **cgi-bin** directory
 - It will create the Apache configuration file (**webster_portNum.conf**) for you to review and include in your existing Apache configuration
- **The installer will specify what the Webster+ generated HTML forms target location is**
 - Configure the File Maintenance Generator with this path
- **If you want to use IIS as the Web Server**
 - The Install process is more manual
 - For instructions, see [IIS Setup for Webster+](#)

WEBSTER+ ENVIRONMENT

- A base line **webster.pxp** program is provided and is designed to be tailored by you to meet your specific needs
 - This program is invoked by all Webster+ requests and is responsible for establishing the Webster+ environment, such as global variables and any other settings you may require
- Default **webster.pxp**

```
! Generic server module for *obj/webster binder
! Modify this for setting global variables and any webster initialization you want
! As of PxPlus 2021 (v19), prefixes should be set in start_up.web in order to
! handle the Wiki interface
!
! Then run "*webster/webster"
!
```

RUN "*webster/webster"

WEBSTER+ ENVIRONMENT

- A base line **start_up.web** program is and is designed to be tailored by you to meet your specific needs
 - Generally, this program will define the location of the data files, pages and programs through the use of the **PREFIX** directive
 - For security, it is best to have the **docroot** directory empty except for the **webster.pxp** and **start_up.web** program
- Default **start_up.web**

! Standard startup for Webster -- sets the prefix rules
! Setting the prefix here allows the WIKI system to use the same search rules
!

```
PREFIX "../data/ ../pages/"  
PREFIX PROGRAM "../prog/"
```

WEBSTER+

RUNNING A WEBSTER+ APPLICATION

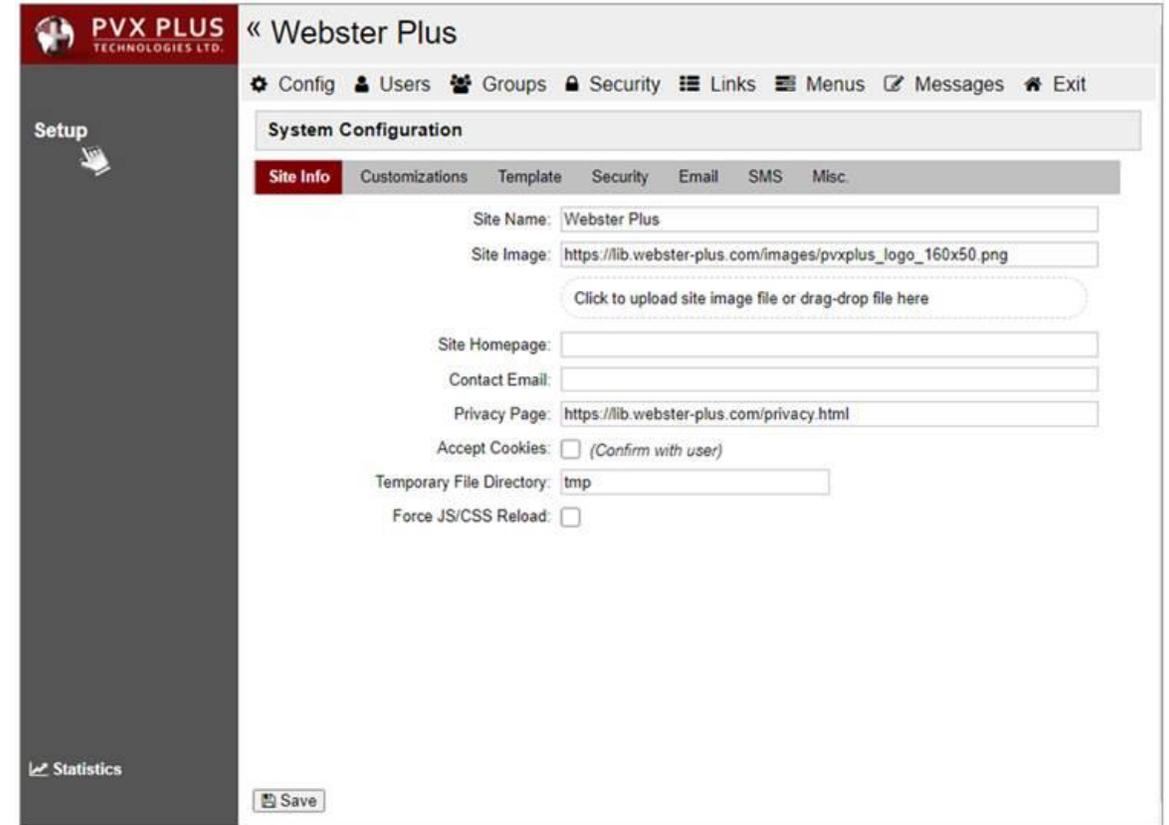
- **To run a Webster+ application**
 - Run your Web Server which you setup during the install
 - EZWeb can be run via the desktop shortcut or script generated by the installer
 - Point a Web browser at the Web Server; e.g. `https://www.myserver.com:pppp` where *pppp* is the port number
 - URL may contain various other parameters which are passed to the page/program
 - Example: `https://www.myserver.com/webster.pxp?pg$=clientmnt&client$=123456`
 - This example will display the page `clientmnt`, having passed it the value of `123456` in the variable `client$`
 - Can also if using EZWeb
 - select the **Launch Webster+ Using EZWeb** task (expand the **Web Deployment** category on the IDE Launcher)
 - Runs the EZWeb Server
 - Launches Web browser pointed to your Web Server automatically

WEBSTER+ REQUEST URL

- URL should include **webster.pxp** program
 - If not included, it is automatically added
 - **webster.pxp** is always run to set up environment
- URL may contain the name of an HTML page (pg\$=xxxx) and if so, it is loaded
 - The page will be run through the [Webster+ Page Binding](#) logic ***obj/webbind** to process short codes
 - If there is no suffix on the name supplied, the suffix ".html" will be applied (thus pg\$=page1 becomes file page1.html)
 - If desired, you can supply a simple text file with no HTML, only text and short codes; the Webster+ bind logic will convert this into an HTML file
 - Associated program identified via **[form xxx]** short code
- URL may contain the name of a program to run (tx\$=xxxx or _prog\$=xxxx) and if so, it is run
 - The program must define the pathname to the HTML to generate and place it in **%Webster'BindFile\$**
- If neither a page nor a program is specified, the system will load the page ***default**

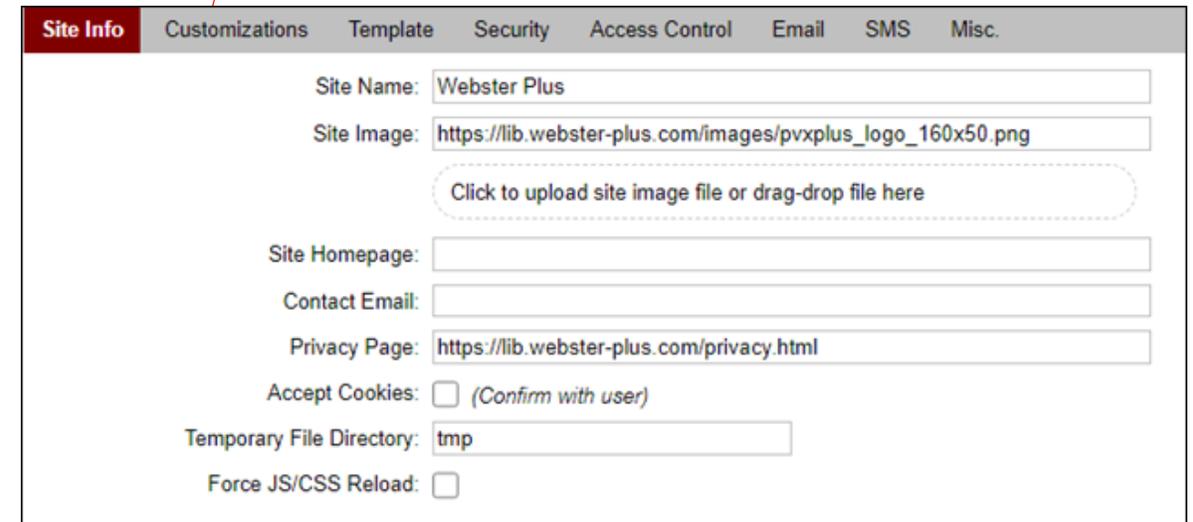
WEBSTER+ SETUP

- Clicking the **Setup** option shown on the left side will bring up the **Setup** menu and **System Configuration** page with **Site Info** loaded
- Using the Setup toolbar across the top of the screen, you can select the various Webster+ Setup utilities
 - [Config](#)
 - [Users](#)
 - [Groups](#)
 - [Security](#)
 - [Links](#)
 - [Menus](#)
 - [Messages](#)



WEBSTER+ SETUP > CONFIG

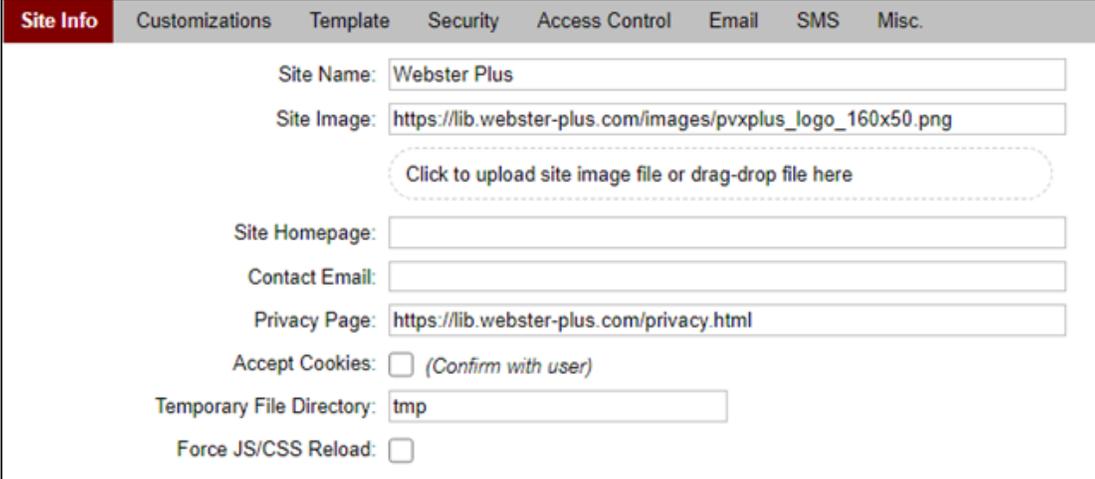
- Settings that are used to define the format and look of a Web site, as well as various internal settings required by the system, such as the Email and SMS servers used to contact users
 - Many of these settings are also accessible through the [%Webster](#) system object
- Use the toolbar across the top of the screen to select the various Webster+ configuration utilities
 - [Site Info](#)
 - [Customizations](#)
 - [Template](#)
 - [Security](#)
 - [Access Control](#)
 - [Email](#)
 - [SMS](#)
 - [Misc.](#)



WEBSTER+

SETUP > CONFIG > SITE INFO

- Click on **Site Info** to bring up the [Site Information](#) page
- This is used to set up the Webster+ applications
 - Title
 - Logo
 - Logo link
 - Contact email
 - Privacy Policy page
 - Whether users are asked about cookies
 - Development options



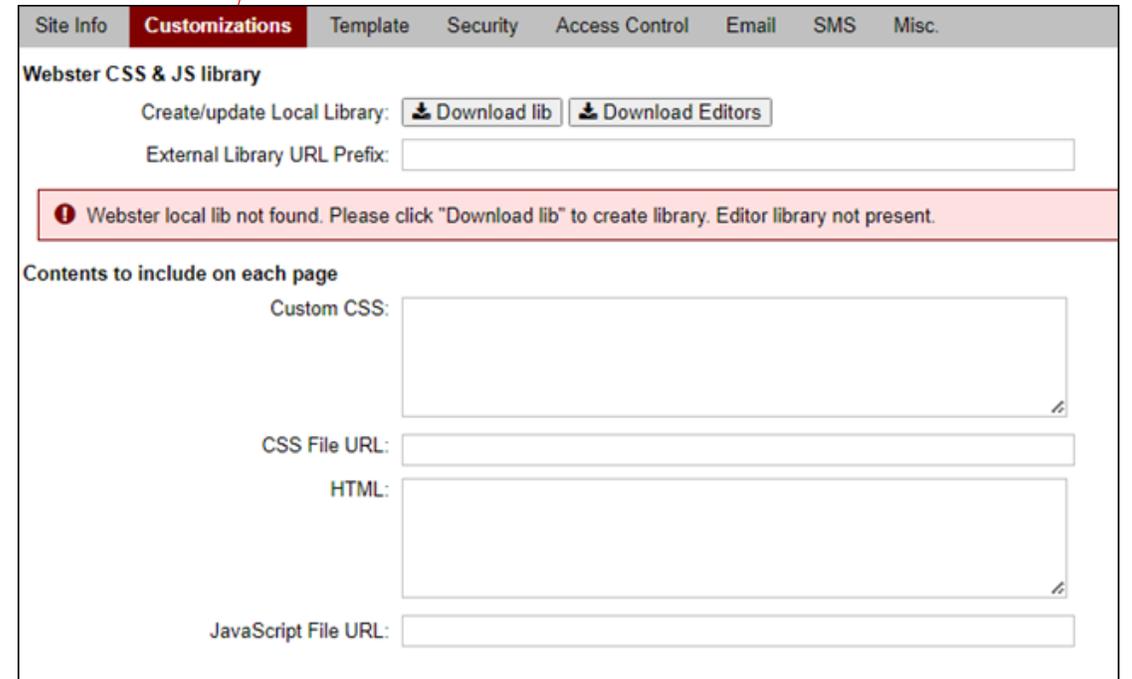
The screenshot shows the 'Site Info' configuration page with the following fields and options:

- Site Name:** Webster Plus
- Site Image:** https://lib.webster-plus.com/images/pvxplus_logo_160x50.png
Click to upload site image file or drag-drop file here
- Site Homepage:** [Empty field]
- Contact Email:** [Empty field]
- Privacy Page:** <https://lib.webster-plus.com/privacy.html>
- Accept Cookies:** (Confirm with user)
- Temporary File Directory:** tmp
- Force JS/CSS Reload:**

WEBSTER+

SETUP > CONFIG > CUSTOMIZATIONS

- Click on **Customizations** to bring up the [Customizations](#) page
- Webster+ uses a number of JavaScript and stylesheet files which can be downloaded so not to rely on the PxPlus servers being available or to maintain/edit them
 - They also can be hosted elsewhere and you can point to them
- Can also specify some custom HTML/CSS code or files that will get added to the generated pages



Site Info **Customizations** Template Security Access Control Email SMS Misc.

Webster CSS & JS library

Create/update Local Library:

External Library URL Prefix:

Webster local lib not found. Please click "Download lib" to create library. Editor library not present.

Contents to include on each page

Custom CSS:

CSS File URL:

HTML:

JavaScript File URL:

WEBSTER+

SETUP > CONFIG > TEMPLATE

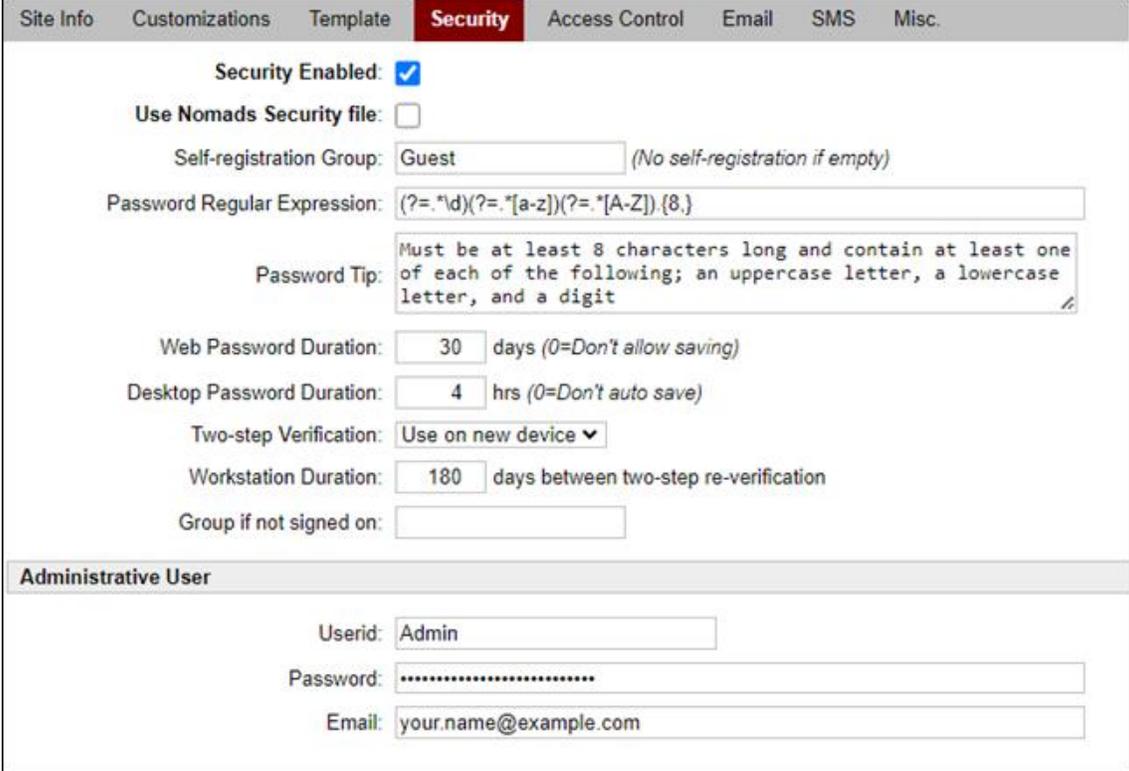
- Click on **Template** to bring up the [Template](#) definition page
- Use default template or specify a custom Template file
 - Webster+ HTML page is returned as part of a template HTML page
 - Inserted into the template file, replacing the short code **[include *]** which must appear within the template HTML
- Define the dimensions of the header and left menu
- Define the default start/landing page
- Define the color of the background and, for some sections, the color of the text to appear in that area
- **Reset to Default colors** button will reset the colors selected to the system default color set

	Background	Text
Top Left Corner:	<input type="color" value="#800000"/>	<input type="color" value="#FFFFFF"/>
Left Edge:	<input type="color" value="#333333"/>	<input type="color" value="#FFFFFF"/>
Top Edge:	<input type="color" value="#CCCCCC"/>	<input type="color" value="#000000"/>
Page Contents:	<input type="color" value="#FFFFFF"/>	<input type="color" value="#000000"/>
Locked Input:	<input type="color" value="#CCCCCC"/>	<input type="color" value="#000000"/>
Query Even Line:	<input type="color" value="#FFFF00"/>	<input type="color" value="#000000"/>

WEBSTER+

SETUP > CONFIG > SECURITY

- Click on **Security** to bring up the system [Security](#) settings
- Security can be enabled/disabled
- Can share User Registration files with NOMADS/iNomads
- Define Group for new users and not logged in users
- Must define an Administrative User



Site Info Customizations Template **Security** Access Control Email SMS Misc.

Security Enabled:

Use Nomads Security file:

Self-registration Group: (No self-registration if empty)

Password Regular Expression:

Password Tip:

Web Password Duration: days (0=Don't allow saving)

Desktop Password Duration: hrs (0=Don't auto save)

Two-step Verification:

Workstation Duration: days between two-step re-verification

Group if not signed on:

Administrative User

Userid:

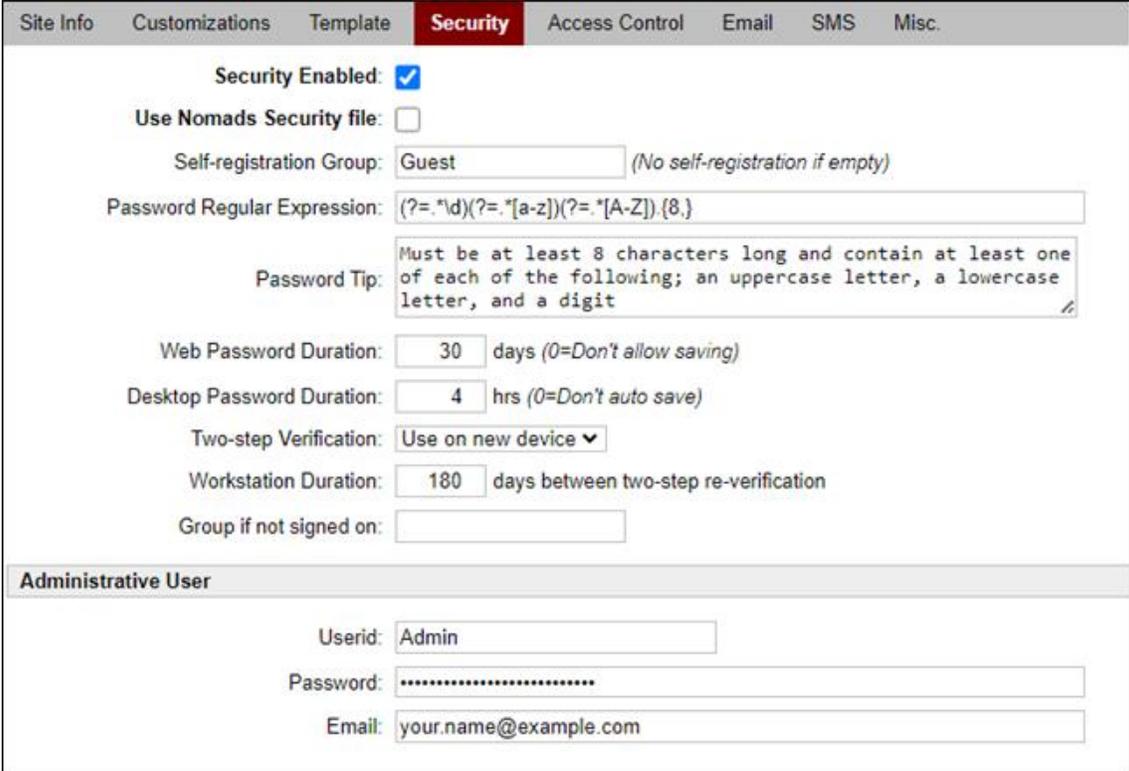
Password:

Email:

WEBSTER+

SETUP > CONFIG > SECURITY

- Define Password format
 - Format defined via Regular expression
 - Default is 8 characters with at least one uppercase letter, one lowercase letter, and a digit
 - Can set the message describing the format
- Password expiry can be set for Web access and ***webster/desktop** utility access
- Control whether system will force Two-Factor Authentication
 - Possible settings: Don't use, Use on new device, Always use
 - Must set up SMS or Email or both on the next tabs
 - Set how many days before requiring re-verification



Site Info Customizations Template **Security** Access Control Email SMS Misc.

Security Enabled:

Use Nomads Security file:

Self-registration Group: (No self-registration if empty)

Password Regular Expression:

Password Tip:

Web Password Duration: days (0=Don't allow saving)

Desktop Password Duration: hrs (0=Don't auto save)

Two-step Verification:

Workstation Duration: days between two-step re-verification

Group if not signed on:

Administrative User

Userid:

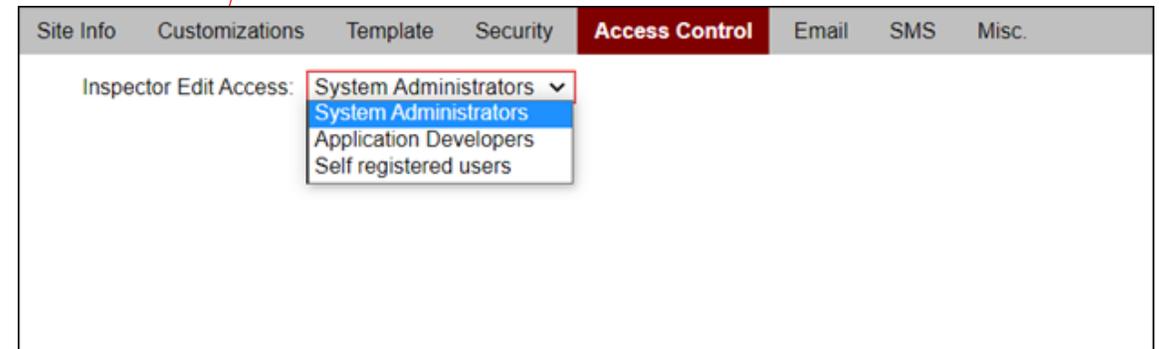
Password:

Email:

WEBSTER+

SETUP > CONFIG > ACCESS CONTROL

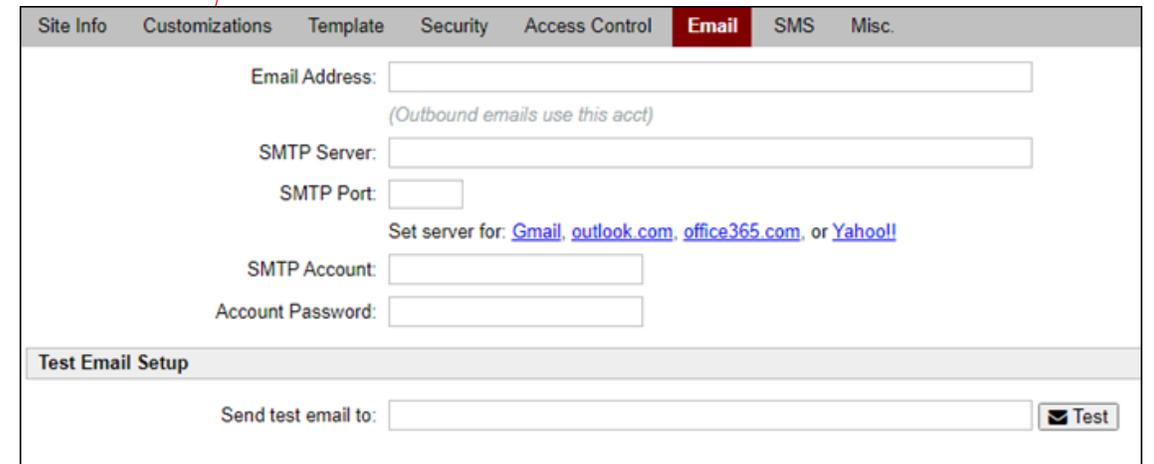
- Click on **Access Control** to bring up the [Inspector Edit Access](#) group setting
 - Only available when Security is enabled
- Set which group of users is allowed to create/delete files and directories, as well as make changes using the Edit button when viewing a file's contents through the Webster+ Inspector
 - Defaults to Admin (System Administrators) group



WEBSTER+

SETUP > CONFIG > EMAIL

- Click on **Email** to bring up the system [Email](#) settings
- Email can be used for lost passwords, Two-Factor Authentication, and registration/error notifications
 - Leave blank to disable
- Set up an email account from which Webster+ will send emails to users
 - If using a common e-mail server select link to autofill Server and port fields
- Can test the settings entered by having Webster+ send a test email



The screenshot shows the 'Email' configuration page in the Webster+ interface. The page has a navigation bar at the top with tabs for 'Site Info', 'Customizations', 'Template', 'Security', 'Access Control', 'Email' (which is highlighted), 'SMS', and 'Misc.'. Below the navigation bar, there are several input fields for email configuration:

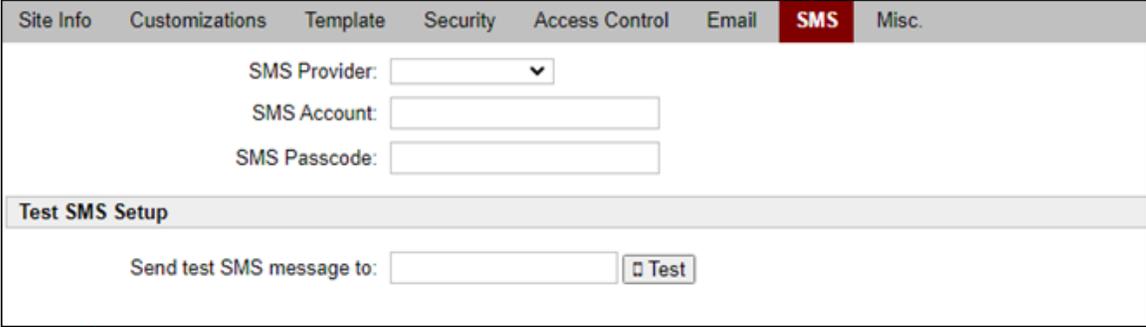
- Email Address:** A text input field with a note below it: "(Outbound emails use this acct)".
- SMTP Server:** A text input field.
- SMTP Port:** A text input field.
- Set server for:** A link that says "Gmail, outlook.com, office365.com, or Yahoo!".
- SMTP Account:** A text input field.
- Account Password:** A text input field.

Below these fields is a section titled "Test Email Setup" which contains a "Send test email to:" text input field and a "Test" button with an envelope icon.

WEBSTER+

SETUP > CONFIG > SMS

- Click on **SMS** to bring up the [SMS](#) text messaging settings
- SMS can be used by Webster+ for [Two-Factor Authentication](#)
 - Leave blank to disable
- You need to have an account with an SMS provider
 - Clickatell
 - Eztexting
 - Seven
 - Smsbroadcast
 - Twilio
 - vonage
- Set up your SMS provider account details here
- Can test the settings entered by having Webster+ send a test SMS message



Site Info Customizations Template Security Access Control Email **SMS** Misc.

SMS Provider:

SMS Account:

SMS Passcode:

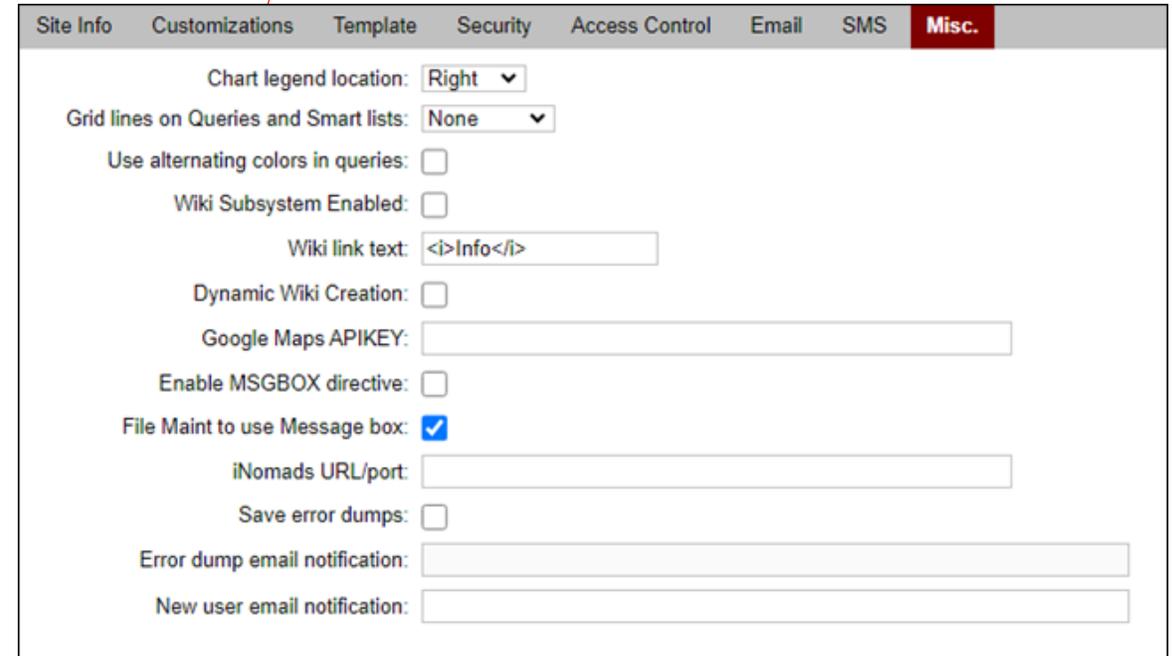
Test SMS Setup

Send test SMS message to:

WEBSTER+

SETUP > CONFIG > MISC.

- Click on [Misc.](#) to bring up additional system settings
- Can set visual preferences with various controls
- Can turn on Wiki for your Webster+ pages
 - Can define Wiki link automatically added to pages
 - Can define whether the system automatically builds a basic Wiki page for you
 - If not selected, will need to create the Wiki pages
- If using Google Maps, input your API key here



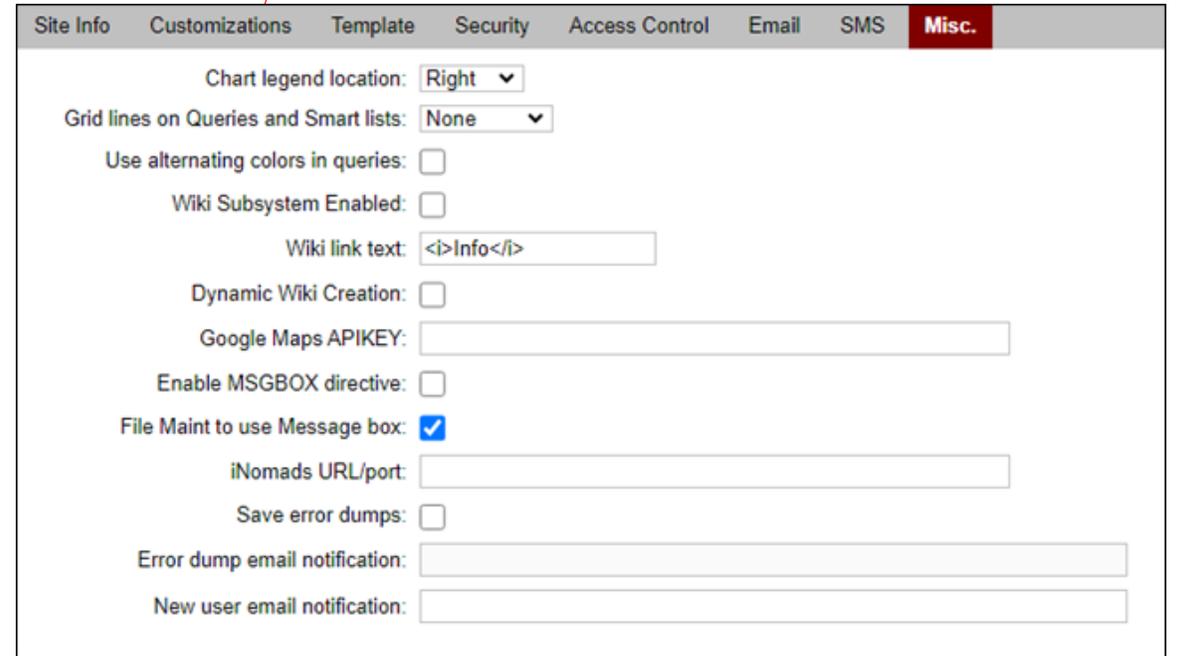
The screenshot shows the 'Misc.' configuration page in the Webster+ interface. The page has a navigation bar at the top with tabs for 'Site Info', 'Customizations', 'Template', 'Security', 'Access Control', 'Email', 'SMS', and 'Misc.'. The 'Misc.' tab is currently selected and highlighted in red. Below the navigation bar, the configuration options are listed:

- Chart legend location:
- Grid lines on Queries and Smart lists:
- Use alternating colors in queries:
- Wiki Subsystem Enabled:
- Wiki link text:
- Dynamic Wiki Creation:
- Google Maps APIKEY:
- Enable MSGBOX directive:
- File Maint to use Message box:
- iNomads URL/port:
- Save error dumps:
- Error dump email notification:
- New user email notification:

WEBSTER+

SETUP > CONFIG > MISC.

- To be able to launch iNomads panels from Webster+, set the iNomads URL/Port
 - It is recommended that iNomads uses same domain and protocol (HTTP vs. HTTPS) as Webster+
 - Required for embedded iNomads Webster+ pages
 - Allows you to just specify the iNomads port
- Can define some debugging options



The screenshot displays the 'Misc.' configuration page in Webster+. The page has a navigation bar with tabs: Site Info, Customizations, Template, Security, Access Control, Email, SMS, and Misc. (highlighted in red). The main content area contains the following settings:

- Chart legend location:
- Grid lines on Queries and Smart lists:
- Use alternating colors in queries:
- Wiki Subsystem Enabled:
- Wiki link text:
- Dynamic Wiki Creation:
- Google Maps APIKEY:
- Enable MSGBOX directive:
- File Maint to use Message box:
- iNomads URL/port:
- Save error dumps:
- Error dump email notification:
- New user email notification:

WEBSTER+

SETUP > USERS

- Click on **Users** to bring up the [User Maintenance](#) utility
 - Only available when Security is enabled
- Displays your User information
 - Edit your own User information
 - If you are part of the Admin group, the system will allow you to enter/edit other users
- Can turn on [Two-Factor Authentication](#)
- Users can have their own template and Start page
- Users cannot edit their own group, disable or delete themselves

The screenshot displays the 'User Maintenance' utility for the 'Admin' user. The navigation bar includes 'Config', 'Users', 'Groups', 'Security', 'Links', 'Menus', 'Messages', and 'Exit'. The 'User information' section contains fields for First Name, Last Name (Administrator), Password, Re-enter Password, Email Address (devon.austen@pvxplus.com), Cell Phone Number, Company, Default template, User Start page, Security Group (Admin), Two-step Verification (Use on new device), and a Disabled checkbox. The 'User status' section shows: User created: 2024-02-29 11:35, Last signon: 2024-09-05 09:32, Last known IP address: ::ffff:127.0.0.1, Email verified: 2024-09-05 09:32, and SMS verified. At the bottom, there are 'Save', 'Delete', and 'Reset' buttons.

WEBSTER+

SETUP > GROUPS

- Click on **Groups** to bring up the [Group Maintenance](#) utility
 - Must be an Admin
 - Security must be enabled
- Create and maintain the Security hierarchy used in Webster+ via User groups
 - Every user belongs to a group
 - Permissions are defined based on groups
 - Can inherit the permissions of sub-groups
 - Can have their own template and Start page
- Admin group is displayed first
 - Type a new Group Name to create a new group
 - Click an existing group from the list to edit

The screenshot shows the 'Webster Plus' interface with the 'Groups' tab selected. The 'Group Maintenance' section is active, displaying a form for defining groups and sub-groupings. The form includes fields for Group Name, Description, Group template, Start Page, and Sub-Groups. A table lists existing groups: Admin (System Administrators), Dev (Application Developers), and Guest (Self registered users). A green message box at the bottom states 'Admin has access to all groups regardless of settings'. Navigation buttons for Save and Delete are visible at the bottom.

« Webster Plus

⚙️ Config 👤 Users **👥 Groups** 🔒 Security 📄 Links 📄 Menus ✉️ Messages 🏠 Exit

Group Maintenance

Define groups and sub-groupings

Group Name:

Description:

Group template:

Start Page:

Sub-Groups:

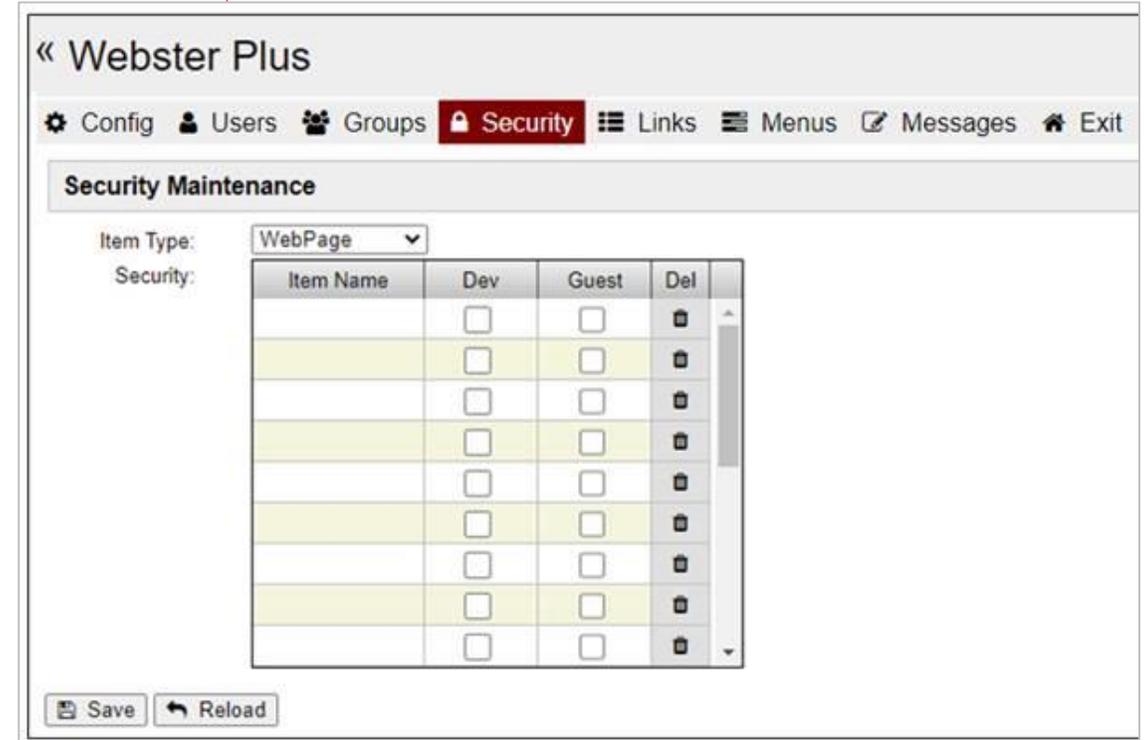
Group	Description	Select
Admin	System Administrators	Incl.
Dev	Application Developers	Incl.
Guest	Self registered users	Incl.

Admin has access to all groups regardless of settings

WEBSTER+

SETUP > SECURITY

- Click on **Security** to bring up the [Security Maintenance](#) utility
 - Must be an Admin
 - Security must be enabled
- Control access to the system by specifying which group of Users are authorized to run:
 - Web Pages
 - Programs
 - Reports
- Items in this grid can only be accessed by Users belonging to one of the groups specified (or a group that includes that group)
- Items not in this grid can be accessed by anyone unless the application restricts it manually



WEBSTER+ SETUP > LINKS

- Click on **Links** to bring up the [Sidebar Links Maintenance](#) utility
- Links are displayed when using the standard Webster+ template or any template/page if you include ***links.html**
- Using the grid, links can be created, deleted, modified and repositioned
- Each link may contain:
 - Display text
 - Security group required to have link display
 - **Any** - Makes link visible to all logged on users
 - **Not On** - Makes link visible to all users if not logged on
 - All defined groups will also be in this list
 - Links only accessed by users belonging to the group specified (or a group that includes that group)

« Webster Plus

⚙️ Config 👤 Users 👥 Groups 🔒 Security **🔗 Links** ☰ Menus ✉️ Messages 🏠 Exit

Sidebar Maintenance

Define the links for the sidebar (max 15)

Each link may contain:

- Text to display for the link
- Security group required to have link display. (**Not on** makes link visible if not logged on)
- Window where the link will open: **New, Same, or Reuse**
- Action type (event, program, URL, or webpage)
- Name associated with the action

Drag	Text	Security Group	Window	Action	Associated Name	Del
☰	Inspector	Admin	New	Program	*explorer	🗑️
☰	Setup	Admin	Same	Program	*setup	🗑️
☰						🗑️
☰						🗑️
☰						🗑️
☰						🗑️
☰						🗑️
☰						🗑️
☰						🗑️
☰						🗑️

[Reload](#)

💾 Save 🔄 Restore to Default

WEBSTER+ SETUP > LINKS

- Each link may contain:
 - Window where the link will open: New, Same or Reuse
 - The **Action** to perform when link is clicked
 - **Event** will send an event to the program associated to the current page
 - **Program** will run a program
 - **URL** will open a specified URL
 - **Webpage** will open a specified Web page
 - Optionally add a top menu to the Web page by appending a Menu name to the Page name separated via a semi-colon (i.e. WebPageName;TopMenuName)
 - Leave blank to display the home/default page
 - **Embed** is similar to **Webpage** but will embed Web page in a Webster+ template
 - **iNomads** will launch an iNomads transaction embedded in the template
 - Name of program, page or event associated with the action

« Webster Plus

Config Users Groups Security **Links** Menus Messages Exit

Sidebar Maintenance

Define the links for the sidebar (max 15)

Each link may contain:

- Text to display for the link
- Security group required to have link display. (Not on makes link visible if not logged on)
- Window where the link will open: **New, Same, or Reuse**
- Action type (event, program, URL, or webpage)
- Name associated with the action

Drag	Text	Security Group	Window	Action	Associated Name	Del
☰	Inspector	Admin	New	Program	*explorer	🗑
☰	Setup	Admin	Same	Program	*setup	🗑
☰						🗑
☰						🗑
☰						🗑
☰						🗑
☰						🗑
☰						🗑
☰						🗑
☰						🗑
☰						🗑

Reload

Save Restore to Default

WEBSTER+ SETUP > MENUS

- Click on **Menus** to bring up the [Menu Maintenance](#) utility
- Menus are displayed on templates/pages
 - If **[menubar menu=xxx]** or **[menu menu=xxx]** short code is used
 - xxx is the Menu Name
 - If page was loaded with a top Menu Name, in which case, a menu is loaded at the top of the page
- Using the Menu input, you can create a new menu by typing in the new Menu Name
- Edit an existing menu by selecting it from the query or typing the Menu Name
- Using the grid, menu items can be created, deleted, modified and repositioned

The screenshot shows the 'Webster Plus' application interface. At the top, there is a navigation bar with icons for Config, Users, Groups, Security, Links, **Menus** (highlighted), Messages, and Exit. Below this is the 'Menu Maintenance' section with the sub-heading 'Define common menus'. A list of instructions explains that each menu item can contain: text to display, an optional symbol, a security group, a window (New or Same), an action type (event, URL, submenu, program, report, or webpage), and an associated name. Below the instructions is a search field labeled 'Menu:' with a magnifying glass icon and navigation arrows. The main part of the interface is a table with the following columns: Drag, Text, Symbol, Security Group, Window, Action, Associated Name, and Del. The table contains eight rows, each with a menu icon in the 'Drag' column and dropdown menus in the other columns. At the bottom of the table is a 'Reload' button. Below the table are three buttons: 'Save', 'Delete', and 'Save as' followed by an empty text input field.

Drag	Text	Symbol	Security Group	Window	Action	Associated Name	Del
☰							🗑️
☰							🗑️
☰							🗑️
☰							🗑️
☰							🗑️
☰							🗑️
☰							🗑️
☰							🗑️

WEBSTER+

SETUP > MENUS

- **Each menu item may contain:**
 - Display text
 - Optional symbol to appear in front of the menu text
 - For a list of symbols, visit <https://fontawesome.com/v4/icons/>
 - When specifying the symbol name, do **not** include the leading "fa-"
 - Security group required to have menu item display
 - Same as Link Maintenance
 - Window where the link will open: **New** or **Same**
 - The **Action** to perform when menu item clicked
 - Same as [Link Maintenance](#) with two new options
 - **Submenu** will open another menu as a submenu
 - **Report** will open a report as a PDF
 - Name of program, page or event associated with the action

« Webster Plus

Config Users Groups Security Links **Menu** Messages Exit

Menu Maintenance

[Define common menus](#)

Each menu item may contain:

- Text to display for the menu item
- Symbol to appear in front of the menu text (*optional*)
- Security group required to have the menu item visible
- Window where the menu item will open; **New** or **Same**
- Action type (event, URL, submenu, program, report, or webpage)
- Name associated with the action

Menu: 🔍 ⏪ ⏩ ⏴ ⏵

Drag	Text	Symbol	Security Group	Window	Action	Associated Name	Del
☰			▼	▼	▼		🗑️
☰			▼	▼	▼		🗑️
☰			▼	▼	▼		🗑️
☰			▼	▼	▼		🗑️
☰			▼	▼	▼		🗑️
☰			▼	▼	▼		🗑️
☰			▼	▼	▼		🗑️
☰			▼	▼	▼		🗑️

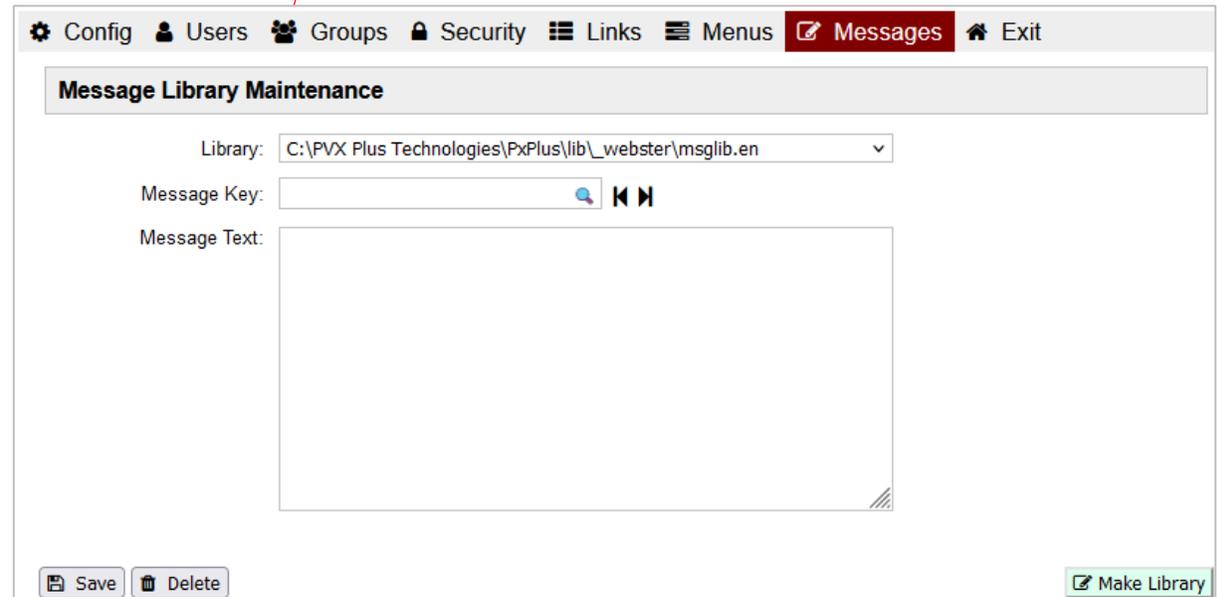
[Reload](#)

Save Delete Save as

WEBSTER+

SETUP > MESSAGES

- Click on **Messages** to bring up the [Message Library Maintenance](#) utility
- Create/edit message libraries to define messages that will be displayed to the user
 - Allows for standardized messaging that can be easily maintained and updated
 - Useful in supporting multilingual environments
- These messages are used via the **MSG()** function, **[msg]** short code, and **Message()** %Webster object method
- Most end-user facing messages in Webster+ come from a system message library ***webster/msglib.en**
 - Don't add application-specific messages to this library as it will be overwritten when upgraded

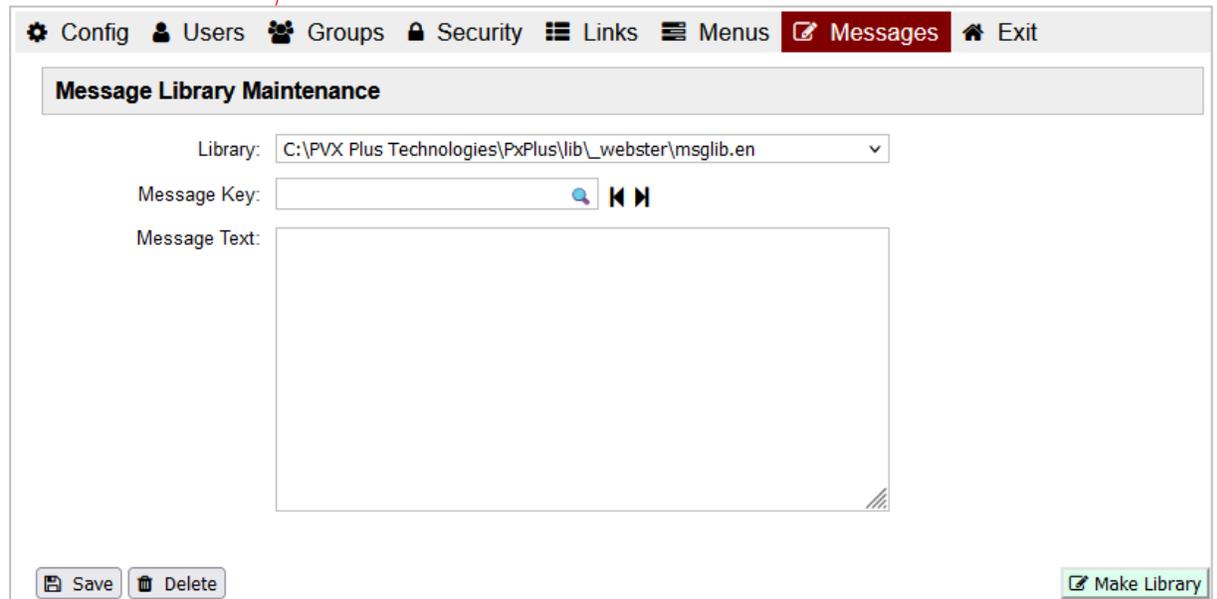


The screenshot shows the 'Message Library Maintenance' utility interface. At the top, there is a navigation bar with icons and labels for 'Config', 'Users', 'Groups', 'Security', 'Links', 'Menus', 'Messages', and 'Exit'. The 'Messages' tab is currently selected. Below the navigation bar, the title 'Message Library Maintenance' is displayed. The main area contains a 'Library:' dropdown menu with the path 'C:\PVX Plus Technologies\PxPlus\lib_webster\msglib.en'. Below this are fields for 'Message Key:' and 'Message Text:'. The 'Message Key:' field has a search icon and navigation arrows. The 'Message Text:' field is a large text area. At the bottom, there are 'Save' and 'Delete' buttons on the left, and a 'Make Library' button on the right.

WEBSTER+

SETUP > MESSAGES

- To create a new message library, use the **Make Library** button
 - It will create a copy of the system message library and put it in your **data** directory
 - Then you can modify it to fit your needs
- To edit an existing message library, select it from the **Library** drop-down list
- To create a new message, type a *Message Key* and then specify the *Message Text*
 - Can include %1, %2 or %3 in your message to allow for a parameter to be replaced by a passed in argument
- To edit an existing message, select it from the query and modify the *Message Text*



The screenshot shows the 'Message Library Maintenance' window in the Webster+ application. The window has a menu bar with 'Config', 'Users', 'Groups', 'Security', 'Links', 'Menus', 'Messages', and 'Exit'. The 'Messages' menu is currently selected. Below the menu bar, the title bar reads 'Message Library Maintenance'. The main area contains a 'Library:' dropdown menu with the path 'C:\PVX Plus Technologies\PxPlus\lib_webster\msglib.en'. Below this are fields for 'Message Key:' and 'Message Text:'. The 'Message Key:' field has a search icon and a refresh icon. The 'Message Text:' field is a large text area. At the bottom of the window, there are 'Save' and 'Delete' buttons on the left, and a 'Make Library' button on the right.

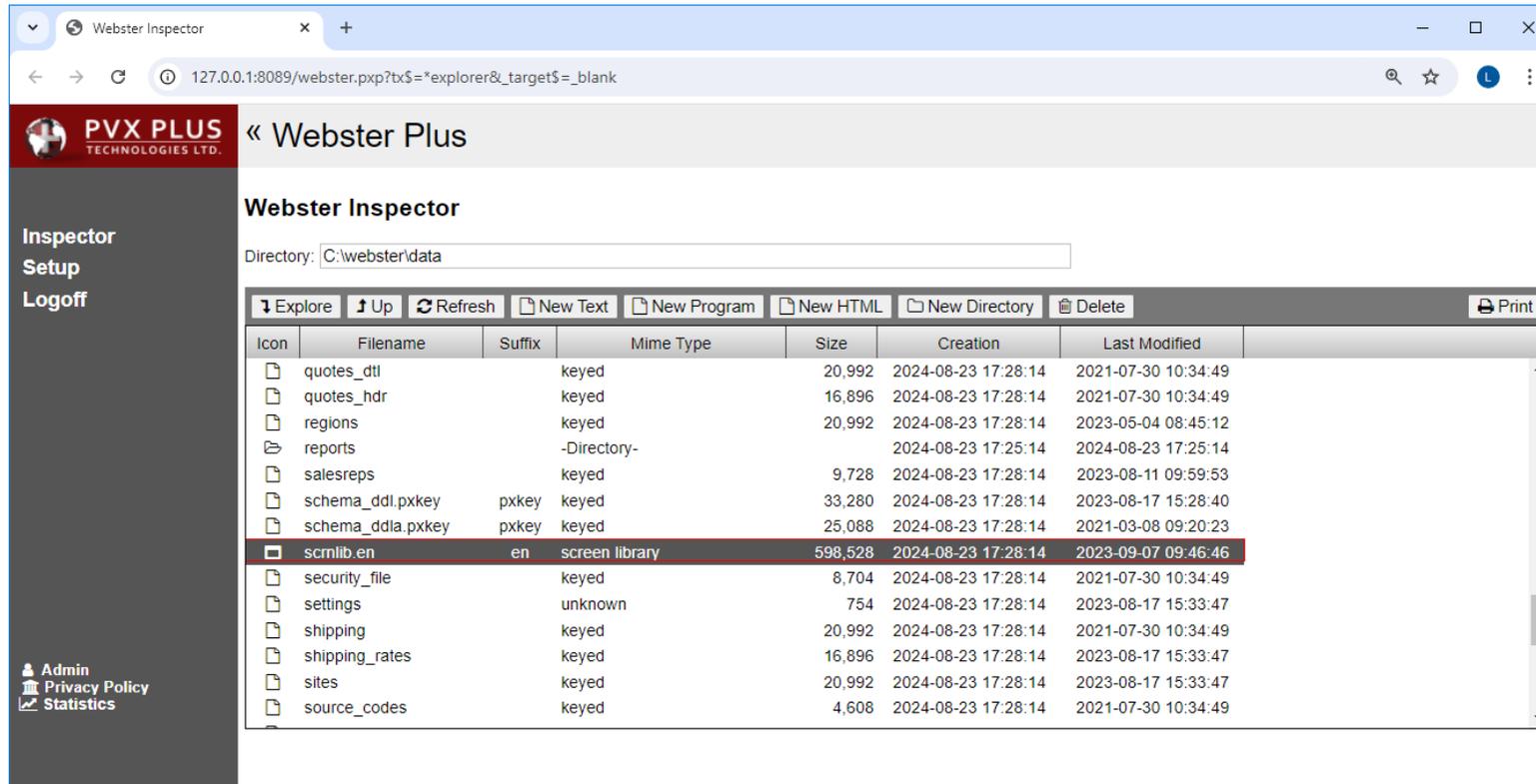
WEBSTER+ INSPECTOR

- Provides options for viewing, creating, editing and deleting files and directories in the Webster+ installation
- Only users who are part of the Admin group (System Administrators) or the Dev group have access
- Like most file explorers, you can create, copy and delete files/directories
- Full browser accessibility for a variety of file types
 - View/Create/Maintain Program, HTML files, and text files
 - View File Information - Data, Data Dictionary and Data Classes
 - Can open screen libraries via Webster+ Library Object Selection utility
- If using the default Webster+ template or one derived from it, an **Inspector** link is visible in the sidebar if you are allowed to use it
- The setting of `%inspector_top$` controls the top level directory allowed in the [Webster+ Inspector](#)
 - Can be set in `webster.pxp`

```
%inspector_top$="C:\webster-plus\"
```

WEBSTER+ INSPECTOR

- To open a file or directory, click on the file or directory to select it and then click the **Explore** button
- This opens the file in view-only mode or displays a list of the files in the directory
- Double clicking on a file or directory does not open it

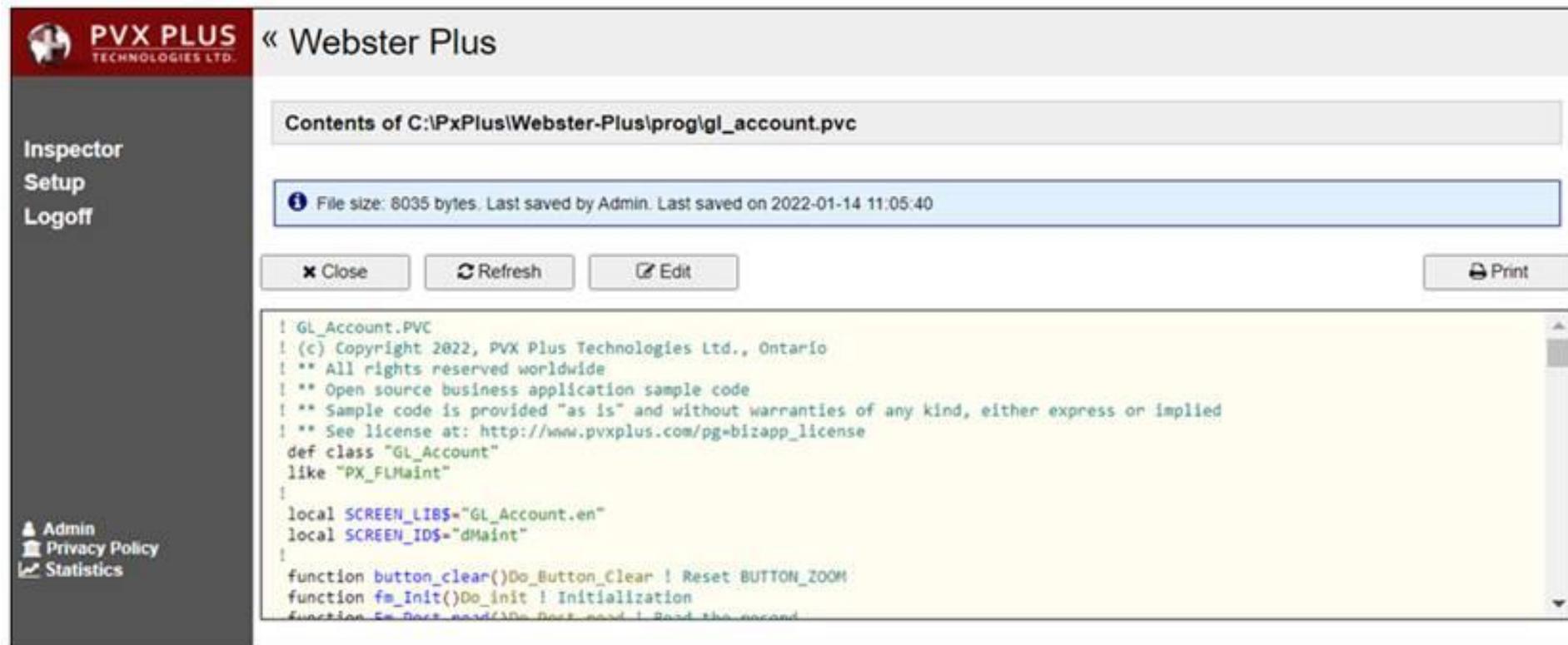


The screenshot shows the Webster Inspector web interface. The browser address bar displays the URL `127.0.0.1:8089/webster.pxp?tx$=*explorer&_target$=_blank`. The page header includes the PVX PLUS TECHNOLOGIES LTD. logo and the title « Webster Plus ». The main content area is titled « Webster Inspector » and shows the current directory as `C:\webster\data`. A toolbar contains buttons for `Explore`, `Up`, `Refresh`, `New Text`, `New Program`, `New HTML`, `New Directory`, `Delete`, and `Print`. Below the toolbar is a table listing files and directories with columns for `Icon`, `Filename`, `Suffix`, `Mime Type`, `Size`, `Creation`, and `Last Modified`. The file `scrnlib.en` is highlighted in red.

Icon	Filename	Suffix	Mime Type	Size	Creation	Last Modified
📁	quotes_dtl		keyed	20,992	2024-08-23 17:28:14	2021-07-30 10:34:49
📁	quotes_hdr		keyed	16,896	2024-08-23 17:28:14	2021-07-30 10:34:49
📁	regions		keyed	20,992	2024-08-23 17:28:14	2023-05-04 08:45:12
📁	reports		-Directory-		2024-08-23 17:25:14	2024-08-23 17:25:14
📁	salesreps		keyed	9,728	2024-08-23 17:28:14	2023-08-11 09:59:53
📁	schema_ddt.pxkey	pxkey	keyed	33,280	2024-08-23 17:28:14	2023-08-17 15:28:40
📁	schema_ddla.pxkey	pxkey	keyed	25,088	2024-08-23 17:28:14	2021-03-08 09:20:23
📁	scrnlib.en	en	screen library	598,528	2024-08-23 17:28:14	2023-09-07 09:46:46
📁	security_file		keyed	8,704	2024-08-23 17:28:14	2021-07-30 10:34:49
📁	settings		unknown	754	2024-08-23 17:28:14	2023-08-17 15:33:47
📁	shipping		keyed	20,992	2024-08-23 17:28:14	2021-07-30 10:34:49
📁	shipping_rates		keyed	16,896	2024-08-23 17:28:14	2023-08-17 15:33:47
📁	sites		keyed	20,992	2024-08-23 17:28:14	2023-08-17 15:33:47
📁	source_codes		keyed	4,608	2024-08-23 17:28:14	2021-07-30 10:34:49

WEBSTER+ INSPECTOR

- If you open a file, it will display in read-only format
 - An **Edit** button will be available if the user is part of the [Inspector Edit Access](#) group



WEBSTER+ INSPECTOR

- When editing a file, you will be taken to the appropriate editor where you can make your changes and save them
 - The editors used are similar to those used in NOMADS; i.e. [ED+](#), [HTML Editor](#)
 - Editing PxPlus data files is **not** supported

```
ED+: C:\PxPlus\Webster-Plus\progl_account.pvc
Save Save As New Close Strip Lines Reformat Goto Find Replace
Bookmarks
Methods
button_clear()
button_setName()
button_zoom()
ChangeAccountGroupRID()
ChangeDetail_List()
ChangeFiscalPeriod()
ChangeFiscalYear()
ChangeSummary_List()
fm_Init()
Fm_New_record()
Fm_Post_read()
fm_Post_remove()
fm_Post_write()
Fm_Pre_remove()
fm_Pre_write()
1 | GL_Account.PVC
2 | / (c) Copyright 2022, Pvx Plus Technologies Ltd., Ontario
3 | / ** All rights reserved worldwide
4 | / ** Open source business application sample code
5 | / ** Sample code is provided "as is" and without warranties of any kind, either express or implied
6 | / ** See license at: http://www.pvxplus.com/pg=bizapp_license
7 | DEF CLASS "GL_Account"
8 |   LIKE "PX_FlMaint"
9 |
10 |   LOCAL SCREEN_LIB$="GL_Account.en"
11 |   LOCAL SCREEN_ID$="dMaint"
12 |
13 |   FUNCTION button_clear()Do_Button_Clear / Reset BUTTON_ZOOM
14 |   FUNCTION fm_Init()Do_init / Initialization
15 |   FUNCTION Fm_Post_read()Do_Post_read / Read the record
16 |   FUNCTION Fm_New_record()Do_New_record / Read the record
17 |   FUNCTION fm_Pre_write()Do_Pre_write / If 1 segment validate the Group/Category
18 |   FUNCTION fm_Post_write()Do_Post_write / Update Main segment if required
19 |   FUNCTION Fm_Pre_remove()Do_Pre_remove / See if record can be deleted
20 |   FUNCTION fm_Post_remove()Do_Post_remove / Remove Main segment if required
21 |
22 |   FUNCTION ChangeAccountGroupRID()Do_ChangeAccountGroupRID
23 |
24 |   FUNCTION button_setName()Do_Button_setName
25 |
26 | / Inquiry folder methods
27 |
```

WEBSTER+ INSPECTOR

- If opening a NOMADS screen library, the [Webster+ Library Object Selection](#) screen is used
 - Similar to NOMADS Library Object Selection
 - Opening library objects requires iNomads to be set up and the user to be part of the [Inspector Edit Access](#) group
 - Test button is used to test the selected library object
 - Windows and non-file maintenance dialogs will run in iNomads
 - Queries and File Maintenance will run in Webster+

PVX PLUS TECHNOLOGIES LTD. « Webster Plus

Webster Library Object Selection
Library: C:\PVX Plus Technologies\IPxPlus\Work\data\scrnlib.en

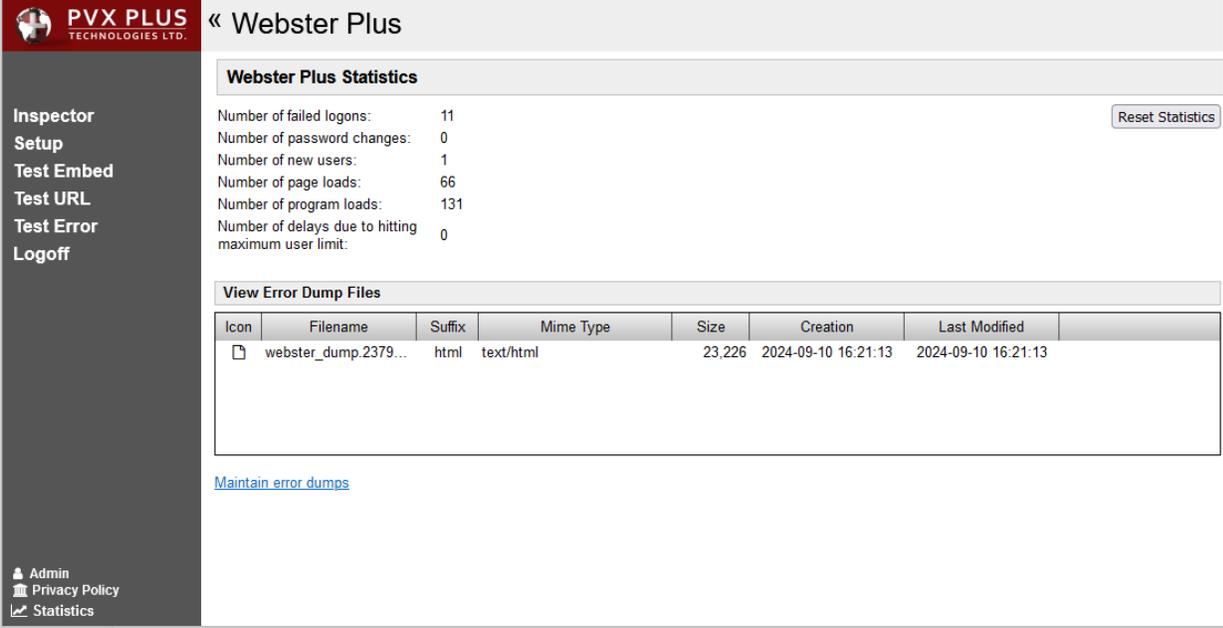
Inspector Setup Logoff

Admin Privacy Policy Statistics

Icon	Object Name	Type	Title	Revised Date	By
🏠	ACTIVEINV	Q	Active (Unposted) Orders	2024/03/26 12:19	Elora
📁	CLIENT	Dh	Client Master File Maintenance	2024/03/26 12:19	Elora (File Maint.)
📁	CLIENT.1	D	Client Master File Maintenance (Tab 1: ...	2024/03/26 12:19	Elora (File Maint.)
📁	CLIENT.2	D	Client Master File Maintenance (Tab 2: A...	2024/03/26 12:19	Elora (File Maint.)
📁	CLIENT.3	D	Client Master File Maintenance (Tab 3: ...	2024/03/26 12:19	Elora (File Maint.)
🏠	CLIENT.Q	Q	Client Master File Lookup	2024/03/26 12:20	Elora
🏠	CLIENT.QRY	Q	Client Master file Lookup	2024/03/26 12:20	Elora
📁	CLIENTS_1	Dh	Client Master File Maintenance	2024/03/19 15:23	Elora (File Maint.)
📁	CLIENTTAX	Dh	Client Tax Group Maintenance	2024/03/26 12:21	Elora (File Maint.)
🏠	CLIENTTAX.Q	Q	Client Tax Group Lookup	2024/03/26 12:21	Elora
🏠	CNTRYSHRTQRY	Q	Country Code Lookup	2024/03/26 12:21	Elora
📁	CONTACT	Dh	Client Contact/Address Maintenance	2024/03/26 12:21	Elora (File Maint.)
📁	CONTACTMNT	Dh	Client Contacts Maintenance	2024/03/26 12:22	Elora (File Maint.)
📁	COUNTRY	Dh	Country Maintenance	2024/03/26 12:22	Elora (File Maint.)
🏠	COUNTRY.Q	Q	Country Lookup	2024/03/26 12:22	Elora

WEBSTER+ STATISTICS

- Clicking the **Statistics** link (on the left) brings up the [Webster+ Statistics](#) page
 - Must be an Admin
 - Security must be enabled
- Displays various statistics to do with the running Webster+ server
 - Statistics are preserved during server shutdowns and a manual reset option is given
- Can display error dumps
 - **Save Error Dumps** option enabled in [Setup > Misc](#)



PVX PLUS TECHNOLOGIES LTD. « Webster Plus

Webster Plus Statistics

Number of failed logons: 11
Number of password changes: 0
Number of new users: 1
Number of page loads: 66
Number of program loads: 131
Number of delays due to hitting maximum user limit: 0

[Reset Statistics](#)

View Error Dump Files

Icon	Filename	Suffix	Mime Type	Size	Creation	Last Modified
	webster_dump.2379...	html	text/html	23,226	2024-09-10 16:21:13	2024-09-10 16:21:13

[Maintain error dumps](#)

Admin
Privacy Policy
Statistics

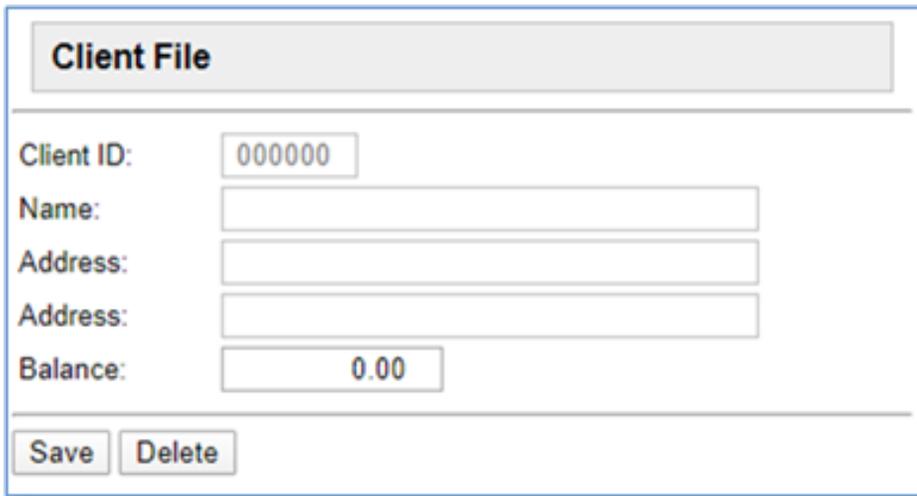
WEBSTER+

BUILD YOUR APPLICATION

- Once you have Webster+ installed and configured
 - Create Webster+ pages via the File Maintenance generator
 - Create Webster+ pages via a HTML editor and short codes
 - PxPlus HTML editor supports inserting short codes and previewing webster+ pages
 - Add links or menu items pointing to the pages
 - Links and menu items can be to iNomads screens

WEBSTER+ HTML PAGE

- A simple Webster+ HTML page
 - A title
 - A program to receive events
 - Input fields, one with a change event
 - Buttons with events



The screenshot shows a web browser window with a form titled "Client File". The form has the following fields and values:

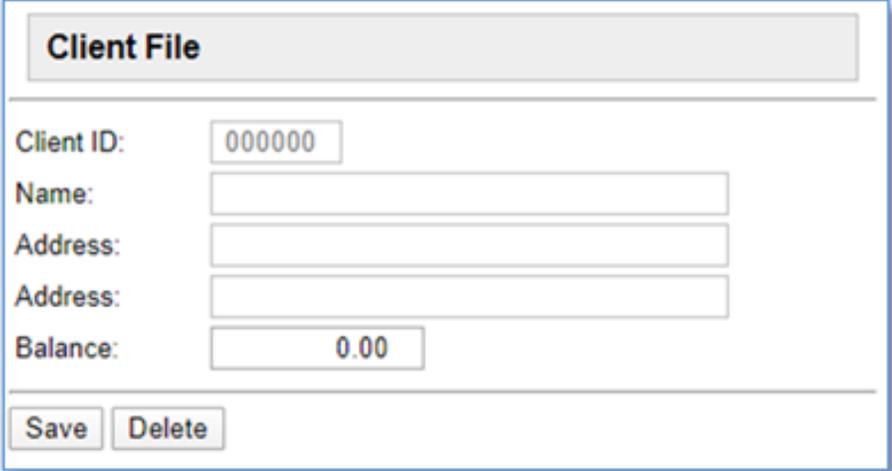
Client ID:	000000
Name:	
Address:	
Address:	
Balance:	0.00

At the bottom of the form, there are two buttons: "Save" and "Delete".

```
<!DOCTYPE html>
<html>
<head></head>
<body>
[tt]Client File[/tt]
<hr>
[form program=MyProg]
<table width="500">
<tr>
<td>Client ID:<td>
<td>[input ClientID$ format="0000" tip="Enter Client #" event=FindClient]</td>
</tr><tr>
<td>Name:<td>
<td>[input Name$ len=30]</td>
</tr><tr>
<td>Address:<td>
<td>[input Address$ len=30]</td>
</tr><tr>
<td>Address:<td>
<td>[input City$ len=30]</td>
</tr><tr>
<td>Balance:<td>
<td>[input Balance format="-###,##0.00"]</td>
</tr></table><hr>
[button event=Save text="Save"] [button event=Delete text="Delete"]
[/form]
</body></html>
```

WEBSTER+ HTML PAGE

- When something is entered into the **ClientID\$** field, Webster+ runs the program "MyProg" and passes in the event "FindClient" in the variable `_event$`, along with all the data from the form
- Selecting Save or Delete would generate their respective events
- In addition to the `_event$` variable, the following variables would also be present



The screenshot shows a web form titled "Client File". It contains the following fields and controls:

- Client ID:** A text input field containing the value "000000".
- Name:** An empty text input field.
- Address:** An empty text input field.
- Address:** A second empty text input field.
- Balance:** A text input field containing the value "0.00".
- Buttons:** Two buttons labeled "Save" and "Delete" are located at the bottom of the form.

Variable	Description
<code>_changed\$</code>	Name of variable that changed and caused event ("ClientID\$")
<code>_prog\$</code>	Name of program ("MyProg")
<code>_topmenu\$</code>	Top menu to display (used by default Webster+ template)

WEBSTER+

SHORT CODES

- Webster+ capabilities stem from its dynamic creation of Web pages
- Webster+ is designed to take the HTML page (.html file), scan it and replace [Short Codes](#) in the document with dynamically created HTML
- Short codes are designed to make it simple to control the layout and add common elements of a business application to your Web page with minimal coding

```
[input ClientID$ format="000000" ttl="Enter client" query=scrnlib;ClientQry]
```

Above example would generate all the HTML required to display an input with a format, tip and associated query button

- Short codes can also allow for a simple way to include code conditionally

```
[if user_security > 5]
[input Salary format=###,##0.00]
[else]
[show str(Salary:"###,##0.00")]
[/if]
```

- Nesting of **[if]** short codes is supported

WEBSTER+ SHORT CODES

- **[form program=...]** short code is used in most Webster+ pages and defines a program that handles the logic
 - The program will have access to the variables defined in the short codes
 - The program will receive the events generated by the Web page
- Short codes consist of a series of keywords with options enclosed in square brackets ([...])
 - Format of the short code is either: **[shortcode option option option ...]** or
[shortcode option option option ...] ... [/*shortcode*]

- **Examples**

```
[checkbox onhold$ on=Y off=N]On Hold[/checkbox]  
[input ClientName$ len=30]  
[template /pages/template1.html]
```

- To include an actual open or close square bracket in the page, precede the bracket with a backslash i.e. \[and \]
- For a list of all supported short codes, see [Short Codes](#)

WEBSTER+

SHORT CODES

- PxPlus Data Dictionary information can be used to construct input fields, Radio Buttons and Check Boxes
 - **usefile=** option specifies that the field relates to a field from a file definition
 - The control will then be generated using all the field characteristics from the file data dictionary

```
[input ClientID$ usefile=filename$]
```

- This allows for dynamic pages generated based on the file specified and NOMADS data class settings
- Optionally use the **[usefile filename\$]** to specify a default file to use
 - To allow just **usefile** without a filename to be used for all inputs

WEBSTER+ CLASSES

- Most short codes can have a **class=xxx** specification for specifying a CSS class
 - The value provided can consist of a single class name or multiple class names
 - Multiple classes can be entered, separated by either spaces or commas
 - When spaces are used as the delimiter, the values must be within double quotes
- **Special Pre-defined Classes**
 - **fill_xxxx** – where *xxxx* is the background color (class='fill_NavajoWhite')
 - **font_nnn** – where *nnn* is the font size as a percentage (class='font_150')
 - **font_xxxx** – where *xxxx* is the font (class='font_Times+New+Roman')
 - Use + for a space within the font name
 - **text_xxxx** – where *xxxx* is the text color (class='text_olive')
 - These classes do not need to be defined in your CSS as the binding logic will automatically create the CSS required for you and include it in the page
- For a list of all classes, see [Webster+ Defined Classes](#)

WEBSTER+ EVENTS

- Webster+ controls like buttons will have an **event=xxxx** defined to specify what happens when pressed
 - The event **xxxx** name will be passed to the program in the variable **_event\$**
- Events that begin with an asterisk (*) are special Webster+ events that you don't have to code
 - ***close** - Closes the current page and either closes the tab/popup window if it was opened by Webster+ or else returns to the ***default** page
 - ***link:xxxx** - Links to a new page or URL
 - ***return:xxxx** - Can be used in a popup window to return the value of the field named by xxx
 - This value will be returned to the input field on the parent page that initiated the popup window and its change event (if any) will be triggered
 - ***redraw** - Forces a redraw of the screen using the current field contents
 - ***eval:javascript** - Locally executes the JavaScript specified on the browser
 - ***map,xxx,xxx,xxx,xxx** - Display a Google map by providing up to five values to specify the street address, city, province/state and country
- For a list of special events, see [Special Webster+ Events](#)

WEBSTER+ PROGRAM

- Handle events via `_event$`
- If the program only does an **EXIT**, the same page is regenerated and sent
- The program can set the `%Webster'BindFile$` to a new page and it will be loaded
- To allow fields to be updated without reloading the whole screen use `%Webster'Update\("", ""\)`
 - To update specific fields call `%Webster'Update\(\)` with the name of the field/fields to update and their values

```
%webster'BindFile$="example.html"
!
if _event$="" then _event$="show"
!
goto lno("evt_"+_event$,err=*next)
%webster'msgbox("Invalid event:
"+_event$,"Error","!")
exit
!
EVT_SHOW:
exit
!
EVT_GET_FILE:
%webster'Update("", "")
if ClientID$<>" " \
then read ("exampleData",key=ClientID$)
exit
!
EVT_SAVE_FILE:
%webster'Update("", "")
if ClientID$<>" " then write ("exampleData")
exit
```

WEBSTER+ UTILITIES

- **Webster+ Object (%Webster)**

- Many functions and properties are provided by the [Webster+ Object](#)

- Update/Refresh a control
- Display a message box
- Display a popup input box
- Force an event
- Hide/Show a control
- Enable/Disable a control

- Automatically created by *webster/webster program during the initial processing of all browser requests

- **Webster+ Library**

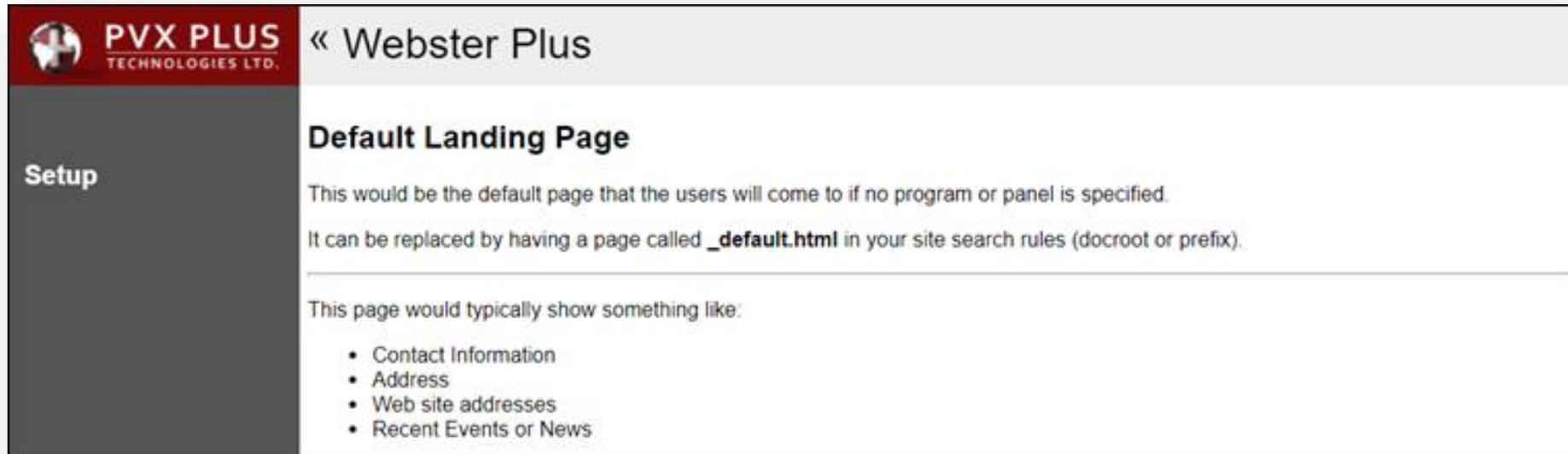
- Webster+ provides a number of programs, files and HTML pages for use in your application

- Programs/pages to handle security
- New user registration
- Password control
- Email
- SMS interfaces
- Report handling
- Menus

- All of these tools reside in the ***webster** system library

WEBSTER+ OVERRIDE LIBRARY

- Programs/pages in the URL that start with an * (asterisk) indicate that it is found in the Webster+ library
- Override any of these programs/pages by creating your own version and placing it in your application directory, replacing the * (asterisk) in the file name with an _ (underscore)
- For example, the page *default would first look to see if there is an _default.html page in your application or otherwise use *webster/pages/default.html



The screenshot shows a web interface for PVX Plus Technologies Ltd. The top left corner features the company logo and name. The main header area displays the title « Webster Plus. Below this, the page is titled 'Default Landing Page'. The content explains that this is the default page for users and can be replaced by a page named _default.html. A list of typical content for this page is provided.

PVX PLUS
TECHNOLOGIES LTD.

« Webster Plus

Setup

Default Landing Page

This would be the default page that the users will come to if no program or panel is specified.

It can be replaced by having a page called **_default.html** in your site search rules (docroot or prefix).

This page would typically show something like:

- Contact Information
- Address
- Web site addresses
- Recent Events or News